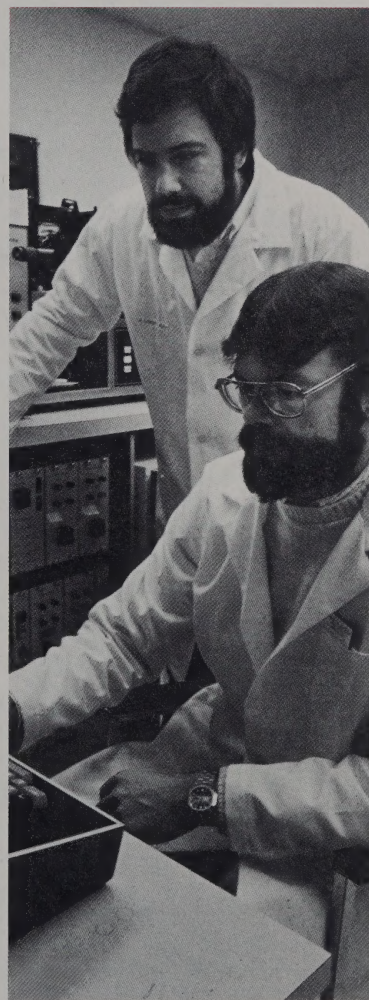
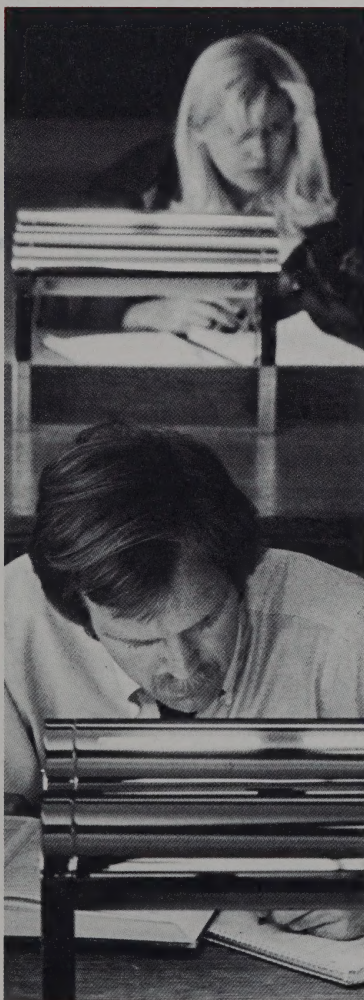
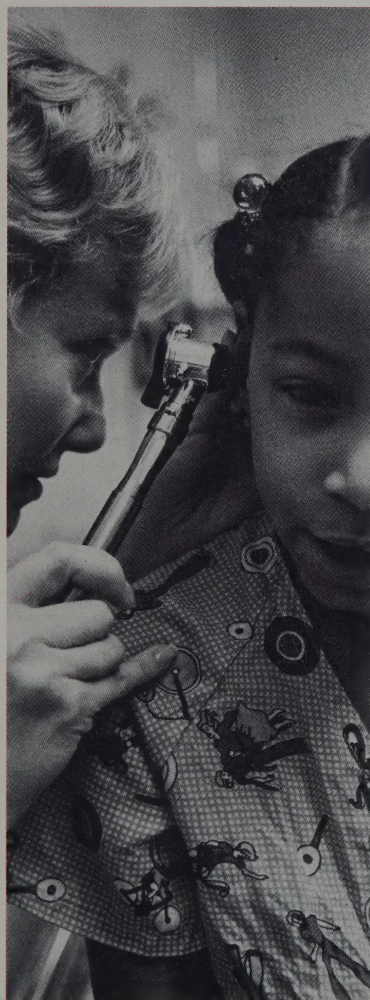


RUSH-PRESBYTERIAN-ST. LUKE'S MEDICAL CENTER

Graduate Medical Education 1989-91



Rush University
Presbyterian-St. Luke's Hospital

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1989-91

Graduate Medical Education

**Rush-Presbyterian-St. Luke's
Medical Center**



**Rush University
Rush-Presbyterian-St. Luke's Medical Center**

**Office of Graduate Medical Education
Rush-Presbyterian-St. Luke's Medical Center
600 South Paulina Street
Chicago, Illinois 60612**

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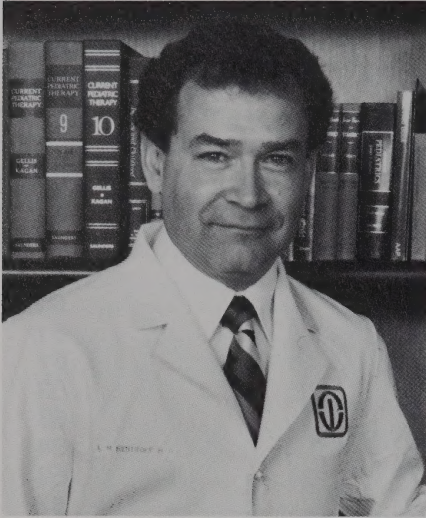
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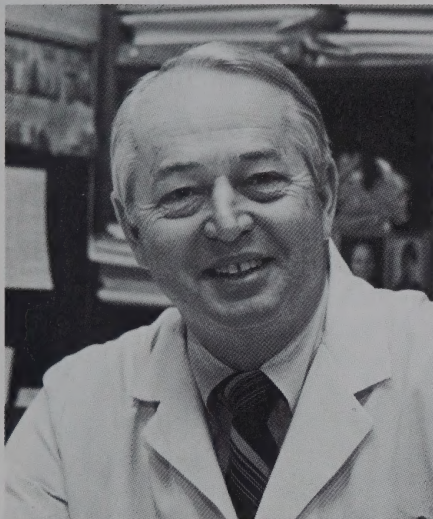
New residents reinvigorate an institution such as ours. My predecessor liked to say that each new group of residents created a positive information balance, bringing much more than they took away. We are delighted that you believe that your graduate medical education could not be in an environment more conducive to learning. In addition, I hope that you will find the environment stimulating to your professional and personal development. Here at Rush outstanding practitioners and scholars share a wealth of knowledge born of hands-on experience and research. The primacy of patient care is woven into the very fabric of the Medical Center and its richly diverse operations and activities. In November of 1985 the Board of Trustees ratified a revised mission statement for the Medical Center which reaffirms the centrality of quality care as the focal point of our activities.

In this changing health care environment patient care itself has begun to migrate away from hospital-based delivery to an array of outpatient settings. The Medical Center has been in a leadership position in this regard and has undertaken a number of initiatives which, together with its outstanding resources in advanced technology and its distinguished professional staff, provide house staff with opportunities to round out their experience through participation in nonhospital care which has special relevance for their future practices.

We are all very busy. I hope that you will take the time to reflect on the goals that you set for yourself in embarking on your medical career years ago. The pressures of undergraduate medical education can at times cause you temporarily to lose sight of the motivation that has truly been the source of the aspiration to become a physician — caring for the well-being of patients. This is, in fact, precisely what we are about.

My welcome to you is sincere. I hope that you feel welcomed by our institution and make the best use of these postgraduate educational years.

Leo M. Henikoff, M.D.
President



Henry P. Russe, M.D.
*Vice President, Medical Affairs
Dean, Rush Medical College*

The patient is central in studies at Rush Medical College. Excellence in patient care is a base for the learning experience, emphasizing the educational process and building lifelong habits of acquisition of medical knowledge.

The faculty, attending medical staff, and resident house staff are all an integral part of the teaching program. Superbly equipped facilities at Rush and the wide variety of patient populations provide a spectrum of opportunities for the development of vital skills and knowledge.

Rush-Presbyterian-St. Luke's Medical Center, responsive to the needs of society for health care, manpower development and education in the health professions, has developed a vertically integrated, multi-institutional system providing for the total health care needs of a population of 1.5 million people. This growing system is managed flexibly to be responsive to the needs of the populations we serve.

Our dynamic institution is a leader in the private sector. You are invited to join us.

Henry P. Russe, M.D.
*Vice President, Medical Affairs
Dean, Rush Medical College*





**The
Medical
Center**

Introduction

Rush-Presbyterian-St. Luke's Medical Center (RPSLMC) offers training in 22 clinical departments to approximately 450 residents, trainees, and fellows each year. Presbyterian-St. Luke's Hospital (PSLH) provides the major clinical base for our graduate medical education programs. The hospital is a national referral center and a community resource. More than a dozen other institutions affiliated with Rush University provide complementary and supplementary opportunities for the trainee in rural, semirural, suburban, and urban environments.

The 962 members of the active medical staff are on the faculty of Rush University, as are many of the attending physicians at our affiliated hospitals. The University's faculty includes more than 3,000 clinicians and scientists.

Many members of the attending staff at Presbyterian-St. Luke's have private practice offices located in one of the professional buildings on campus. Postgraduate training in many departments includes opportunities to follow patients in these offices.

History of the Medical Center

The traditions of Rush-Presbyterian-St. Luke's Medical Center began with Rush Medical College, which graduated over 10,000 physicians from its founding in 1837 until it suspended its activities in 1942. The graduates and the faculty of Rush played major roles in the establishment of the medical schools of both Northwestern University and The University of Chicago.

In 1883, at the urging of the Rush faculty, Presbyterian Hospital was founded as the first voluntary hospital in the country built for the patients and students of an academic medical facility. In 1956, Presbyterian Hospital merged with another long-established, community-based hospital, St. Luke's, to form Presbyterian-St. Luke's Hospital.

In 1969, an incorporation joined the charters of the inactive Rush Medical College and the hospital to form Rush-Presbyterian-St. Luke's Medical Center. The medical college resumed activities shortly thereafter, admitting students in 1971.

Rush University was created in 1972 when the College of Nursing joined Rush Medical College. These two colleges were joined by a third, the College of Health Sciences, in 1975. The Graduate College, formerly positioned within the College of Health Sciences, was established as a free-standing graduate college in 1981.

Facilities

Now with more than 150 years of service to Chicago and the Midwest, Rush-Presbyterian-St. Luke's Medical Center is widely recognized as one of the nation's leading academic health centers. Its primary mission—to provide high quality, compassionate, comprehensive health care to all patients—is accomplished through its many highly skilled and specialized professionals, extensive services and programs, and numerous facilities both at the Medical Center's main campus and at some 30 locations throughout the Chicago area.

The Rush System for Health radiates from the Medical Center's 33-acre campus on the near West Side where are located Presbyterian-St. Luke's Hospital with 903 beds, Rush University with its four colleges, and the Johnston R. Bowman Health Center for the Elderly, a 176-bed geriatric rehabilitation hospital. Here also are found most of the 7,500 physicians, nurses, scientists, faculty and supporting staff; a number of specialty centers which coordinate treatment, research and education, among them the Rush Cancer Center, the Multiple Sclerosis Center, The Thomas Hazen Thorne Bone Marrow Transplant Center of Rush-Presbyterian-St. Luke's Medical Center and the Rush Alzheimer's Center; and major research facilities which support more than 1,200 active research projects.

In addition, the Medical Center's patient care resources include Sheridan Road Hospital, on Chicago's north side, and two hospitals integrated into the Rush System (Copley Memorial Hospital, Aurora, and Rush North Shore Medical Center, Skokie). They also include the ANCHOR Organization for Health Maintenance with 19 offices in the metropolitan area, ACCESS Health (an independent practice association), Rush Contract Care (a preferred provider organization), Rush-Presbyterian-St. Luke's Occupational Health Centers with six offices, the Rush Home Health Services and satellite offices in River City and the Northwestern Station Atrium Building. The Medical Center is also affiliated with 14 hospitals in Illinois and Indiana, and with 16 colleges and universities in six states.

The Medical Center is a leader in the health care field, achieving national and international recognition for its exciting discoveries evolving out of research projects and for its innovative treatment programs which respond to major health problems.

In addition to Rush-Presbyterian-St. Luke's Medical Center, the clinical network consists of:

Bethany Hospital, Chicago	212 beds
Central DuPage Hospital, Winfield	371 beds
Christ Hospital and Medical Center, Oak Lawn	873 beds
Elmhurst Memorial Hospital	319 beds
Galesburg Cottage Hospital, Galesburg	265 beds
Grant Hospital of Chicago, Chicago	508 beds
LaGrange Memorial Hospital, LaGrange	276 beds
LaPorte Hospital, LaPorte, Indiana	227 beds
MacNeal Hospital, Berwyn	427 beds
Marianjoy Rehabilitation Center, Wheaton	91 beds
Mile Square Health Center, Inc., Chicago	outpatient facility
St. Mary's Hospital, Streator	248 beds
Swedish Covenant Hospital, Chicago	355 beds
West Suburban Hospital Medical Center, Oak Park	374 beds

Active Medical Staff	962
----------------------	-----

Patient Care

Presbyterian-St. Luke's Hospital	
Bed capacity (excluding bassinets)	903
Total admissions (including newborn)	28,220
Total days patient care (including nursery)	234,390
Occupancy	77.04%
Emergency room visits	27,387
Blood transfusions	39,231

Sheridan Road Hospital	
Bed capacity	186
Total days patient care	26,001

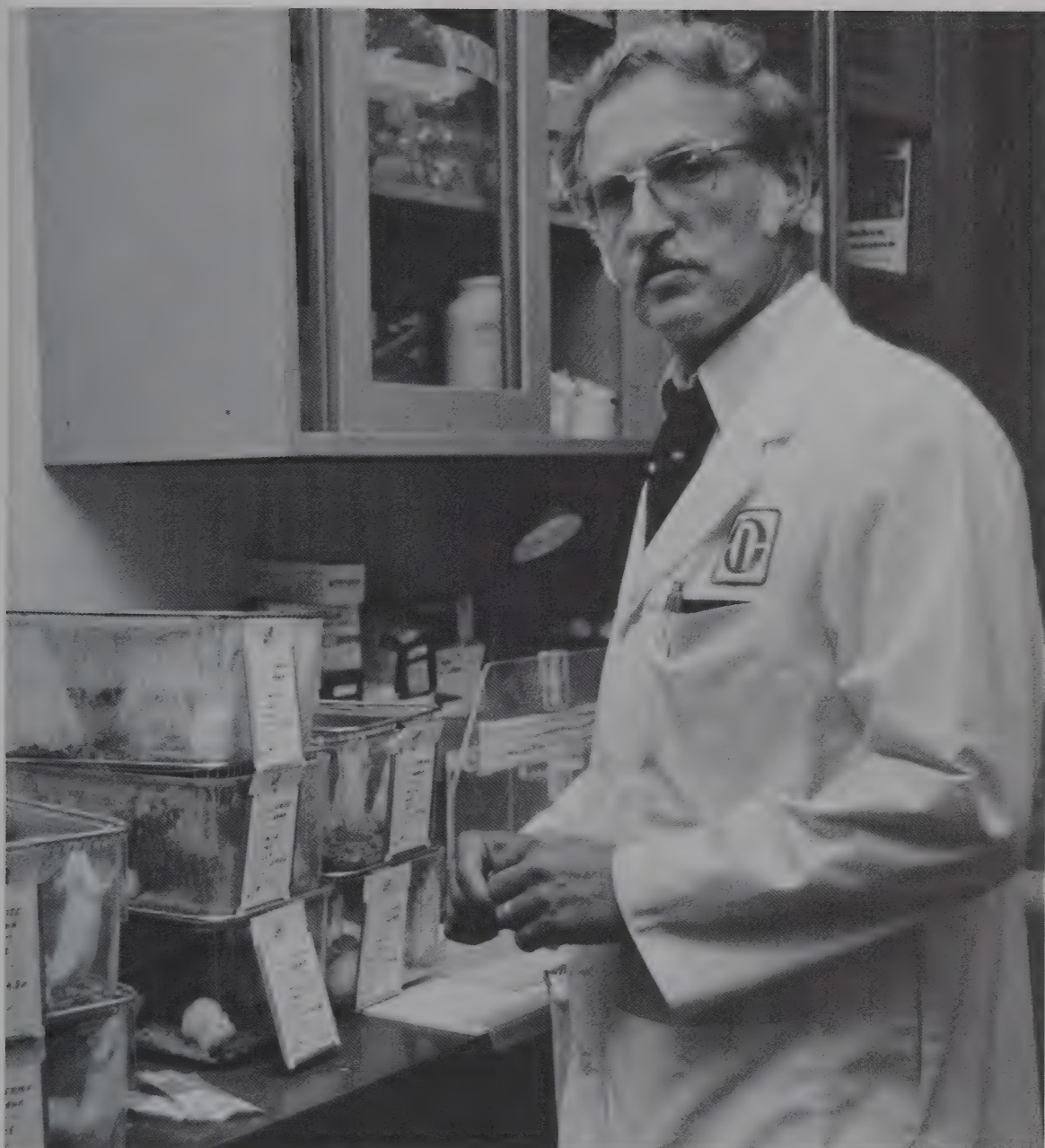
Johnston R. Bowman Health Center for the Elderly	
Bed capacity	176
Total days patient care	37,237

G1	G2	G3	G4	G5	G6	G7							
Family Practice			Peds. Specialties										
							Pediatrics						
							Med. Specialties						
Internal Medicine			Physical Medicine & Rehab.										
							Dermatology						
							Neurology						
Psychiatry				Pathology									
Obstetrics-Gynecology													
Anesthesiology							Plastic						
General Surgery					CV-Thoracic								
					Urology					Neurosurgery			
					Otolaryngology								
Orthopedics					Ophthalmology								
							Diagnostic Radiology						
							Therapeutic Radiology						

Rush University	Faculty	3,269
(Rush Medical	Student body (including house officers)	1,599
College, College of	For a complete list of Rush Medical College faculty,	
Nursing, College of	see the Rush University Bulletin.	
Health Sciences,		
The Graduate		
College)		

Research	<p>Opportunities are available for house officers to participate in master's and doctoral programs in conjunction with their graduate medical education. Approximately five percent of the current Medical Center budget is devoted to research, and the proportion is growing. The commitment has involved annual expenditures in the area of \$14 million, funded by private agencies, foundations, corporations, federal and state agencies, and individuals.</p> <p>The Medical Center has a number of interdisciplinary committees for patient care, in which physicians, surgeons, scientists, psychologists, nurses and other health professionals develop integrated therapies for patients with diseases such as multiple sclerosis, rheumatoid arthritis and Alzheimer's Disease. The interdisciplinary approach also is used in the research areas, especially in the approaches to cancer, cardiovascular diseases and orthopedics. House officers are encouraged to take an active role in the continuing exchange of information and insight.</p> <table> <tr> <td>Research projects in progress</td><td>1,264</td></tr> <tr> <td>Research publications</td><td>1,182</td></tr> <tr> <td>Research awards, 1986-7</td><td>\$14,410,977</td></tr> </table>	Research projects in progress	1,264	Research publications	1,182	Research awards, 1986-7	\$14,410,977
Research projects in progress	1,264						
Research publications	1,182						
Research awards, 1986-7	\$14,410,977						

Programs in	Graduate medical education programs offered at Rush, along with the minimum requirements for specialty board certifications, are shown on the chart on page 9. All G-1 positions are offered through the National Resident Matching Program.
Graduate Medical	Residency programs in obstetrics and gynecology, orthopedics, general surgery, pediatrics, and family practice are fully integrated with those at network hospitals. Recruitment for residency and fellowship positions at Rush is handled by individual department chairmen and inquiries about programs and requests for applications should be addressed to them (see program descriptions that follow).
Education	



Medical Sciences and Services

Walter Fried, M.D.
Associate Dean for
Medical Sciences and Services
and Associate Vice President
for Medical Affairs

**Department of
Immunology/
Microbiology**

**Program in Allergy
and Clinical
Immunology**

Howard J. Zeitz, M.D., Director

The Department of Immunology/ Microbiology offers a two-year residency in allergy and clinical immunology (with an optional third year) to prepare physicians to assume a leadership role in the field of allergy and clinical immunology. Upon successful completion of the program, trainees are prepared to take the examination of The American Board of Allergy and Immunology, a Conjoint Board of The American Board of Internal Medicine and The American Board of Pediatrics.

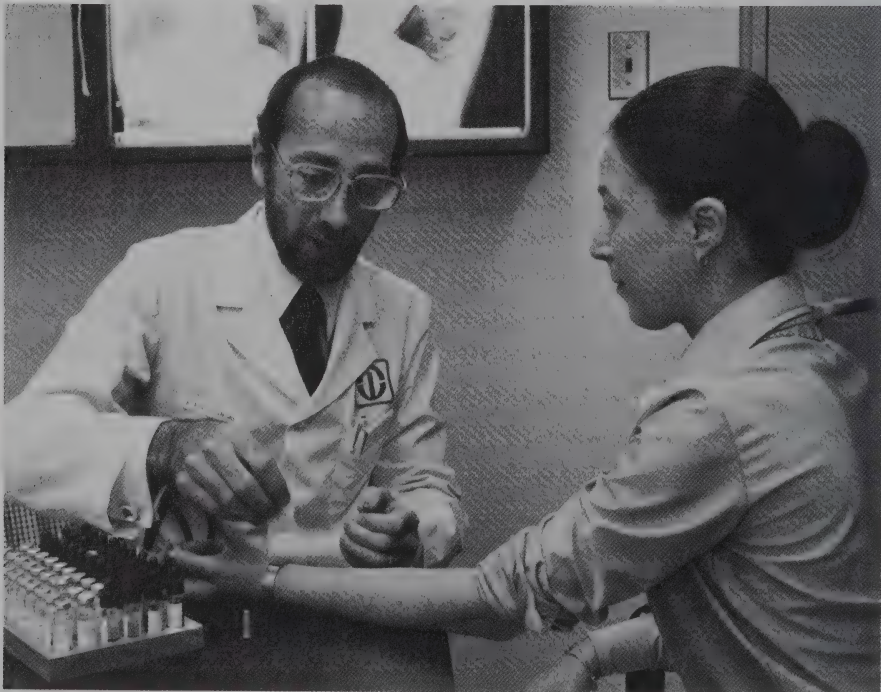
The goal of the training program is to provide balanced, intensive and diversified training in all aspects of allergy and clinical immunology. Teaching clinics are conducted in the Professional Building on the main campus, at the Max Samter Institute of Allergy and Clinical Immunology (Grant Hospital), and at the Mile Square Health Center. Approximately 1,000 new outpatients and 150 new inpatients are seen yearly.

There are more than 10,000 outpatients visits yearly.

The clinical service provides care for inpatients and outpatients with the classical allergic diseases of urticaria, rhinitis, asthma and pulmonary hypersensitivity diseases, as well as patients suffering from immunodeficiency diseases and systemic hypersensitivity diseases including vasculitis and systemic lupus erythematosus.

Trainees are responsible for the care of patients, under the direct supervision of an attending physician. Trainees learn routine and specialized diagnostic procedures including skin testing, pulmonary function testing, bronchoprovocation testing and challenge testing. Trainees also receive instruction regarding a wide variety of clinical immunology laboratory techniques.

The formal didactic program includes hospital teaching rounds, patient care conferences and basic and clinical immunology conferences scheduled on a regu-



lar basis throughout the week. Lectures on specialized topics cover a wide variety of subjects in pulmonary medicine, infectious disease, rheumatology, oncology, dermatology, nephrology and hematology. Trainees attend a variety of conferences, seminars, and formal courses sponsored by the department. Trainees also take an active role in the education of rotating medical students and medical and pediatric residents.

All trainees participate in the basic and/or clinical research programs of the department. Research is conducted under the direct supervision of one of the

members of the department. Areas of current interest include: the immunobiology of the inflammatory response, with emphasis on the complement system; the pathogenesis of allergic disease in general and food allergy in particular; host defenses against infection; and the development of new treatments for allergic diseases.

Trainees must have completed an approved residency in internal medicine or pediatrics prior to starting the training program in allergy and clinical immunology. Please direct inquiries to Howard J. Zeitz, M.D., Department of Immunology/Microbiology.

Department of Dermatology

***Frederick D. Malkinson, M.D.,
D.M.D., The Clark W. Finnerud,
M.D., Professor and Chairman***

The Department of Dermatology offers a three-year residency training program accredited by the American Board of Dermatology. The program accommodates a total of four residents. One new resident is accepted for each of two years and two are accepted every third year. All appointments are made through the National Dermatology Matching Program. The focus of training is on the prevention, pathogenesis, diagnosis (including histopathologic) and treatment of skin diseases. There is special emphasis on systemic disease—skin disease associations and relationships. The understanding of normal skin care as it relates to preventive medicine aspects of dermatology is stressed. The tutorial method of clinical teaching is intensively applied and is enhanced by a favorable staff-to-trainee ratio (three full-time and 13 part-time volunteer staff members).

During the first year, the resident participates in the outpatient service by making initial contact with new patients and discussing diagnostic and therapeutic im-

pressions under supervision of the attending physician. The resident learns routine and special diagnostic procedures such as biopsies and minor excisions, patch testing, dark field examination, and KOH examination for fungi. The resident gradually assumes more responsibility for patient care. Each hospitalized patient is assigned to a specific resident who is responsible for organizing the workup and treatment. Second-year residents assume greater independence and also assist in the clinical training of medical students and residents from other services. Third-year residents assume additional responsibilities, such as independently conducting clinics at an associated facility, and preparing and giving lectures and other formal teaching sessions for medical students and other health sciences students and practitioners. Some department administrative duties pertaining to the resident training programs (clinic assignments and schedules, organization of seminars, etc.) are assigned to the third-year chief resident.

Clinical experience encompasses a broad scope of problems including cutaneous infections,

severe blistering diseases and drug eruptions, psoriasis and other major dermatoses, cutaneous malignancies, connective tissue diseases and complicated diagnostic problems. The department is a major referral center for the greater Chicago area. Specialty clinics include pediatric, pigmented lesion and surgery clinics where routine and more complicated procedures such as hair transplantation, scalp reductions, dermabrasion, flap rotations and sclerosing chemotherapy are performed. Residents are also trained in the administration of phototherapy and dermatologic laser therapy.

Specialty programs include weekly histopathology conferences and lecture series including radiation therapy, photother-

apy, mycology and the various dermatological basic sciences as well as weekly formal journal club and book review meetings. Third-year dermatology residents have the opportunity to rotate to other services in the institution. Patients with diagnostic, treatment, or other interesting problems are presented and discussed at monthly staff conferences. Residents also attend the monthly meetings of the Chicago Dermatological Society. National and regional dermatological meetings, as well as other scientific meetings, may be attended on a selective basis. The department is actively involved in clinical and basic research and interested residents have the opportunity to participate in these activities during the resident training period.

Department of Family Practice

Erich E. Brueschke, M.D., Chairman and Program Director

William Schwer, M.D., Associate Chairman and Associate Program Director

Thomas Dent, M.D., Associate Program Director and Director, Christ Hospital Family Practice Center

The Department of Family Practice offers a postdoctoral three-year combined hospital residency, the Rush-Christ Residency in Family Practice, with an optional one-year fellowship to train future teachers of family medicine. The Rush-Christ Residency in Family Practice is a strong university-based program. Emphasis is on teaching and educational opportunities for the resident, combined with community-oriented training at Christ Hospital and Medical Center in suburban Oak Lawn. The residency program is accredited by the Accreditation Council for Graduate Medical Education and the Residency Review Committee for Family Practice.

The *sine qua non* of family prac-

tice is the knowledge and skill that allow the physician to confront relatively large numbers of unselected patients and to develop therapeutic relationships with these patients and their families over extended periods of time. The residency is structured to prepare the physician for this role. There are nine residency positions in each year of the program and one fourth-year fellowship.

During the first year, residents spend 20 weeks in internal medicine. Eight weeks are spent in the inpatient family practice service. There are 12 weeks spent in pediatrics at Rush and Christ where the resident trains in the inpatient ward and the nursery. Twelve weeks of rotation in obstetrics and gynecology are at Christ Hospital and Medical Center. The residents spend approximately one-half day per week seeing their own patients in the Christ Hospital and Medical Center Family Practice Center. There are weekly conferences held in the Family Practice Center.

In the second year, residents take 12 weeks of pediatrics at Rush and Christ Hospital and Medical Center, where the resident trains in the inpatient ward, emergency room and a four week elective; a four-week rotation in neurology, an eight-week rotation in general surgery at Grant Hospital, a six-week rotation in emergency medicine at Christ Hospital and Medical Center, and additional rotations in dermatology, behavioral medicine, alcoholism, orthopedics and otolaryngology/ophthalmology, urology and occupational medicine. Residents spend two to three afternoons a week seeing their own patients in the Family Practice Center at Christ Hospital and Medical Center.

In the third year, inpatient experiences include approximately 12 weeks of required internal medicine electives, other electives to meet the needs of the resident, and rotations in community medicine, geriatric medicine, six-week rotations as the Family Practice Center resident and as the senior resident on the family practice in-service. Residents spend approximately 14 to 16 hours per week seeing their own patients in the Family Practice Center. Behavioral sciences and clinical psychology experiences are continuous over the three years.

This is a combined hospital residency program. All outpatient Family Practice Center training is at Christ Hospital and Medical Center where, for the entire three years, residents maintain continuity of care with their patients. A team approach is used. By the third year, each resident will be caring for about 200 families. The integration provides experiences at both a tertiary care academic medical center and a high-quality private practice, community-oriented teaching hospital.

Each resident's program can be individualized through electives

to meet personal interests, career objectives and the clinical responsibilities to be faced in the community. Graduated responsibility is the prevailing objective—residents occupy their own offices and provide care to their own patients. An approach to primary care utilizing a broad spectrum of health care professionals is encouraged. This is strengthened by a full-time clinical psychologist and a medical social worker assigned to the center.

Conferences held at the Family Practice Center include conferences on behavioral science topics, clinical research, office management, medical problem solving, family practice grand rounds, geriatric medicine and problem-oriented medical grand rounds. All important decisions affecting resident rotations and/or residency affairs are jointly made by faculty in consultation with residents. Monthly meetings are held with elected resident representatives from each year, the chief resident in family practice and the faculty.

Research interests among the department's faculty focus on a variety of primary care issues and are coordinated through the Section of Research and Education Development.

Address all inquiries to the chairman.

Section of

Research and Education Development

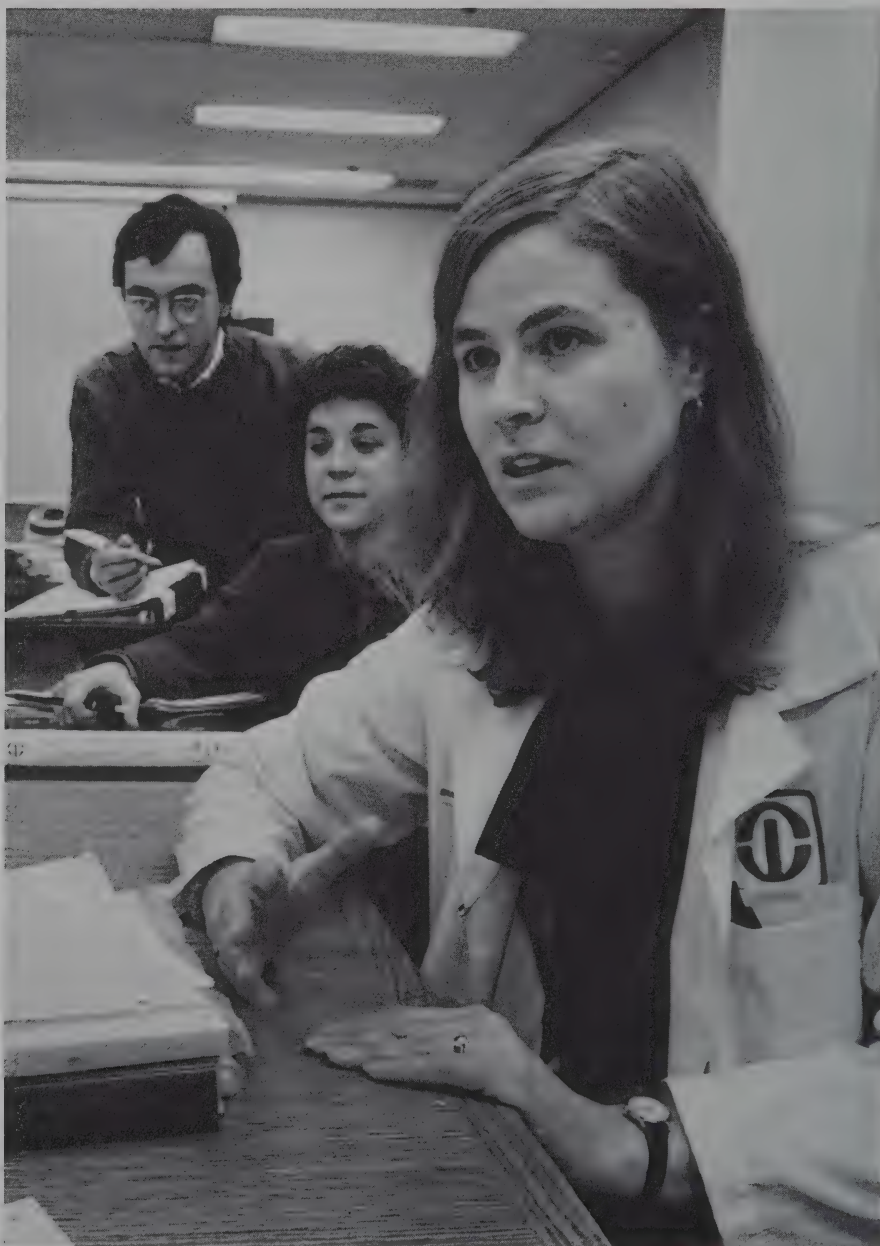
Deborah F. Hotch, Ph.D., Director

The Section of Research and Education Development is a component of the Department of Family Practice. This section, established with funding from a United States Department of Health and Human Services Public Health Service grant to the department, directs the implementation of clinical, ed-

ucation and evaluation research projects. The department's faculty development program, including an annual workshop, is a key section responsibility. Research lectures and grant applications are also coordinated by the section.

Adolescent health, alcoholism intervention, the delivery of health care by family physicians, the impact of illness on the family, and

the family physician's influence on lifestyle changes are areas of continuing interest. Faculty also design and implement family practice medical education projects including yearly surveys of applicants to the Rush-Christ Family Practice Residency Program and the use of problem-based learning strategies in clinical teaching.



Department of Internal Medicine

Roger C. Bone, M.D., *The Ralph C. Brown, M.D., Professor and Chairman*

Stuart Levin, M.D., *The James Lowenstine Professor of Internal Medicine and Associate Chairman*

The Department of Internal Medicine provides a three-year program of postdoctoral residency training accredited by the American Medical Association. An additional year of advanced training with teaching responsibility and an adjunct medical staff appointment is offered in a chief residency to four third year internal medicine residents. Thirty-five first-year positions are offered annually through the National Resident Matching Program.

The first year is structured to provide intensive patient contact, utilizing some 320 medical beds divided into eight general medical units and a medical intensive care unit. This year is divided into four two-month rotations on general medical units, which have from 30 to 47 patients. Most general medical units are staffed by two second- or third-year residents, four first-year residents, and several Rush Medical College students. One month is devoted to medical intensive care experience. An elective month is usually available and may be taken in any medical or surgical specialty, or in pediatrics, psychiatry, or neurology.

In the second year, the resident spends six months on a general medical unit and has two months of emergency room-triage experience. The remainder of the year is spent on elective services.

The third-year resident spends one to three two-month rotations on a general medical unit and the rest of the year in the subspecialty areas of his or her choice. Throughout the training period, each medical house officer is assigned one-half day a week to

an outpatient medical practice. This continuing assignment provides the physician with the opportunity to provide long-term care.

With the expansion of Rush-Presbyterian-St. Luke's Medical Center to include affiliated network hospitals, the department has expanded its training potential to include medical unit experience in a community hospital setting. House officers may elect to spend limited periods of time at affiliated institutions with approved programs in internal medicine.

The Department of Internal Medicine schedules regular teaching sessions, including medical grand rounds, attending and chairman's rounds, weekly subspecialty rounds, morbidity and mortality conferences, and radiologic conferences. Seminars, lectures, and clinico-pathological conferences are conducted by staff and by visiting professors of medicine throughout the year.

The chief residents conduct grand rounds for first-year residents each Saturday morning, and provide formal conferences on the wards each week. A vigorous program of education is provided in the ambulatory care facilities of the department. Residents in the Department of Internal Medicine rotate through emergency services for two months. This rotation is unique for the residents in that most of the patients are evaluated on first encounter and medical decisions must be made in an expeditious fashion. The residents have a diversified medical experience. Besides evaluating unstable or ambulatory medical patients, the resident also manages a spectrum of surgical patients as well as psychiatric, obstetric and gynecologic patients. The basic learning experience is that of a preceptorship with the resident

performing the primary care and supervisory support coming from attending physicians of the academic faculty in medicine and emergency services.

Individualization of programs is encouraged and other postgraduate programs are available, including elective rotations through ear, nose, and throat (ENT), office gynecology, ophthalmology, and psychiatry for internists. Further intensive care experiences beyond the residency are available in the clinical and research fellowships offered by the various sections of the department.

In accordance with Section 709 of the Public Service Act, Rush-Presbyterian-St. Luke's Medical Center will, upon request from qualified applicants, offer shared-schedule residency programs in internal medicine. These programs will be designed by the department in consultation with the candidate making the request.

Inquiries regarding the program should be directed to the chairman.

Section of

Cardiology

***Philip R. Liebson, M.D.,
Acting Director***

The Section of Cardiology provides extensive consultation and diagnostic services, participates in medical student education in both the basic and clinical sciences, and conducts research studies involving clinical cardiology, experimental biochemistry and physiology, and computer application.

Residents in the Department of Internal Medicine rotate through this section. Educational emphasis is on the improvement of physical diagnostic abilities in clinical cardiology, and the acquisition of skills in interpretation of invasive and noninvasive studies. Particu-

lar emphasis is placed on evaluation of electrocardiographic and catheterization data.

The Cardiology Fellowship Program is a three-year track, available upon completion of three years of residency training in internal medicine. Training includes consultation; cardiac catheterization and coronary arteriography; electrophysiology, including intra-cardiac and epicardial mapping; exercise electrocardiography; and cardiac graphics, including M-mode, 2D and Doppler echocardiography and phonocardiography. Fellows also gain experience in pacemaker insertions and technology; nuclear cardiology, including gated blood pool scanning and rehabilitative coronary care; and computer techniques in cardiology and preventive cardiology. A third year allows concentration in research and instrumentation in a specific field of cardiology.

Inquiries regarding the fellowship program should be addressed to the section director.

Section of

Digestive Diseases

***Seymour Sabesin, M.D.,
The Josephine Dyrenforth
Professor of Gastroenterology
and Director***

The Section of Digestive Diseases provides endoscopic and diagnostic services, consultations and medical education in matters relating to the gastrointestinal tract. The section has two units: the gastrointestinal unit and the liver unit, which serve to fulfill these functions. In addition, the liver unit is investigating a variety of clinical and fundamental problems related to liver cell membranes, toxic and viral hepatitis, and chronic hepatitis.

Residents and students may

elect to rotate for one-month periods with the liver unit or gastrointestinal unit consultation services. They will participate in the diagnostic work-ups and procedures under supervision of the attending staff. Formal teaching sessions include weekly pathology slide seminars and clinical case conferences, in addition to daily patient care rounds. Resident and student research projects are strongly encouraged and may be developed upon application to the section director.

Two-year fellowships are available to individuals who are board eligible or certified in internal medicine. Fellows will be eligible for the gastroenterology board examination upon completion of the fellowship.

Inquiries should be addressed to the section director.

Section of

Endocrinology and Metabolism

John Bagdade, M.D., Director

The focus of the Section of Endocrinology and Metabolism is a broad yet intensive approach to the clinical, teaching, investigative and laboratory aspects of the discipline. In addition to providing consultations for patients with endocrine and metabolic disorders, as well as specialized procedures, the section maintains a clinical laboratory which performs a broad range of endocrine assays.

There is active research on diabetes, metabolic bone disease, and gonadal disorders. The steroid unit of the section performs determinations of serum and urinary steroids of various types and conducts a research program on steroid metabolism in essential hypertension.

The teaching program is active at all levels. In addition to regu-

larly scheduled endocrinology conferences, the section accepts one clinical and research fellow, who functions for a minimum of two years, and one or two medical residents who rotate through the section at two-month intervals.

The section offers residents and fellows supervised experience with inpatients. Residents spend no mandatory time in clinic. Rotations are also available in network hospitals. Research is encouraged and is either primarily clinical or laboratory in nature, depending on the desires of the trainee.

Members of the resident staff are assigned for one to two months at a time. Fellowships which are approved for board certification are available at the end of the third year of residency training.

Fellows must be eligible to take the examination for certification by the American Board of Internal Medicine. Please direct inquiries to the section director.

Section of

Geriatrics

Thomas Schnitzer, M.D., Ph.D., The Willard L. Wood, M.D., Professor of Rheumatology and Director

The Section of Geriatrics is concerned primarily with the continuing development of the Johnston R. Bowman Health Center for the Elderly (JRB), a comprehensive restorative care and residential facility on the Medical Center campus. The clinical staff reflects the multidisciplinary nature of restorative care for the elderly and, in addition to a wide variety of paraprofessionals, includes physicians trained in psychiatry, neurology, physical medicine and rehabilitation.

In order to bring community-

based care closer to the elderly patient, outpatient activities are conducted at the Medical Center and at community outpatient facilities (William Jones Senior Citizens Apartments and Larrabee Homes).

Research activities are directed to the identification of treatable conditions in elderly patients with dementia, and to the correlation of findings on computed tomography and clinical patient observation. Other projects include an in-depth study of the process of institutionalization and the development of a protocol for program evaluation.

House officers in internal medicine rotate through the Geriatric

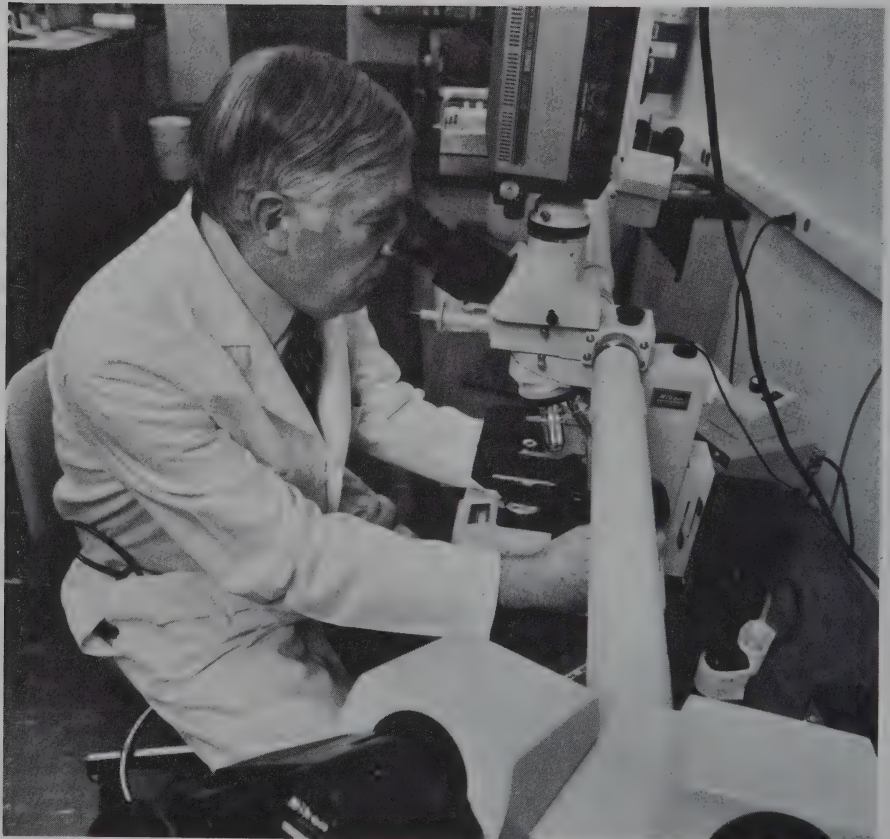
Medicine Unit. A two-year geriatric fellowship is available as well as elective rotations for undergraduate students. Inquiries regarding the fellowship program should be addressed to the section director.

Section of

Hematology

***William H. Knospe, M.D.,
The Elodia Kehm Professor and
Director***

The Section of Hematology provides consultative services for patients with hematologic malignancies.



nancies, anemias, coagulation disorders, immunohematology, and non-malignant disorders. The section provides diagnostic laboratory information and hematologic measurements for all Medical Center patients and includes the clinical hematology laboratories, the Blood Center and the coagulation and platelet function laboratories. The Blood Center provides full service blood banking, including provision of various component therapies and frozen blood. The Clinical Hematology Laboratory is highly automated and incorporates a dedicated interactive computer to assist in expediting the reporting of results. In addition to all standard procedures for counting and identifying blood cells, the laboratories provide many highly sophisticated diagnostic hematology and coagulation laboratory procedures.

This section offers residents and fellows supervised, clinical experience with inpatients and outpatients and opportunities to participate in diagnostic laboratory procedures. Teaching activities include daily hospital teaching rounds and weekly sectional conferences and seminars on patient-oriented problems, clinical and basic science topics in hematology, marrow morphology, clinical coagulation problems and the Medical Center's weekly lymphoma and tumor conferences. Members of the resident staff are assigned for two months at a time and fellowships are available at the end of the third year of residency training.

A program of bone marrow transplantation has been established under the direction of Herbert Kaizer, M.D., Ph.D., with Solomon S. Adler, M.D., and other physicians in the section as members of the transplant team. There are a variety of other clinicians and laboratory scientists who are also involved.

Participation in the research

activities of the section is encouraged. Research in the Section of Hematology continues to span a broad range of activities. These activities include biochemical and physiological studies at cellular and subcellular levels, basic studies of pattern recognition and artificial intelligence as applied to recognition of blood cells, and clinical studies of the effect of diseases and treatment of diseases in patients.

Inquiries regarding the fellowship program should be addressed to the section director.

Section of

Infectious Disease

Stuart Levin, M.D., The James Lowenstine Professor of Internal Medicine and Director

The Section of Infectious Disease provides consultation and care for patients with hospital- and community-acquired infections. The section is also responsible for surveillance and control of outbreaks of infection within the hospital, through the activities of the hospital epidemiologist and four nurse epidemiologists. Teaching activities include daily hospital teaching rounds, a lecture course on the pharmacology of antimicrobial agents, and a series of lectures in the second-year medical school curriculum on the pathophysiology of infectious disease. A weekly three-hour research and case discussion conference is held. The laboratory of the section is available for investigative activities. Current areas of research interest include: (1) clinical, pharmacological, and efficacy studies of new antibiotics; (2) studies on the evolution of antibiotic-resistant organisms; (3) the development of rapid methods of identification of etiologic agents of infection; (4) laboratory investigations of agents active

against hepatitis B, clinical and basic studies regarding the acquired immune deficiency syndrome; and (5) investigation of pathogenesis and therapy of infectious diarrheas including *Campylobacter fetus*. Members of the section serve as consultants to the City of Chicago Department of Health and are involved with investigations of citywide outbreaks of infections.

Members of the resident staff are assigned for two-month rotations. Two- or three-year fellowships are available after the third year of residency training in medicine. Applications for fellowships should be made to the section director.

Section of

Nephrology

Edmund J. Lewis, M.D., Director

Patients with various primary and systemic lesions of the kidney and genitourinary tract, or electrolyte and metabolic problems are studied and treated by the staff of the nephrology section. There is a special interest in the diagnosis and therapy of patients with collagen-vascular disease. The laboratories of the unit are available for many special studies, including immunological investigations of serum and renal biopsy material. The application of plasma-exchange therapies to several diseases, especially lupus erythematosus, is under active investigation. There are active acute and chronic dialysis programs. Patients with chronic intermittent dialysis or transplantation are cared for by the staff of the section.

The section is pursuing research on several immunological aspects of renal disease. Systemic lupus and cryoglobulinemia are a particular area of interest. A cell biology program is being carried out

in concert with members of the Department of Pathology.

There are daily clinical conferences with the renal pathologists to review tissues from patients who have had renal biopsies. Each week, there are regular research meetings, a renal pathology conference, a renal-urologic-radiologic conference, and a nephrology conference.

Members of the resident staff are assigned to the section for one- or two-month rotations, and research fellowships are available at the end of the third year of residency training. Applications for fellowships should be made to the section director.

Section of

Oncology

Jules E. Harris, M.D., The Samuel G. Taylor III, M.D., Professor and Director

The educational program of the Section of Oncology emphasizes that patients with cancer may live long, productive, and useful lives if properly treated. Each year, the Section of Oncology sees approximately 1,200 new cancer patients, who provide an ample and varied spectrum of oncological problems. The residents and fellows follow and study these patients under the direction of members of the section. New patients and problems are discussed at bi-weekly meetings.

The section's program stresses the importance of a combined approach to tumor therapy using the resources of the departments of surgery, therapeutic radiology, pathology, and nuclear medicine. There are weekly breast tumor, lymphoma, and gynecologic tumor conferences. The section is also involved in many of the clinical trials sponsored by the Eastern Cooperative Oncology Group, National Surgical

Adjuvant Breast Project, and the Gynecologic Oncology Group. Pilot studies involving chemotherapy and immunotherapy with emphasis on the clinical study of interferon and other biological response modifiers are undertaken in association with the institution's affiliated network of hospitals.

The section has an active research program in human and experimental tumor immunobiology. These investigations involve animal studies concerned with the immunogenetics of tumor graft rejection and clinical studies examining the effect of cytotoxic drugs on immunoregulatory mechanisms in solid tumor cancer patients. Research opportunities are available in both areas of investigation for students, residents and fellows.

A four- to eight-week rotation

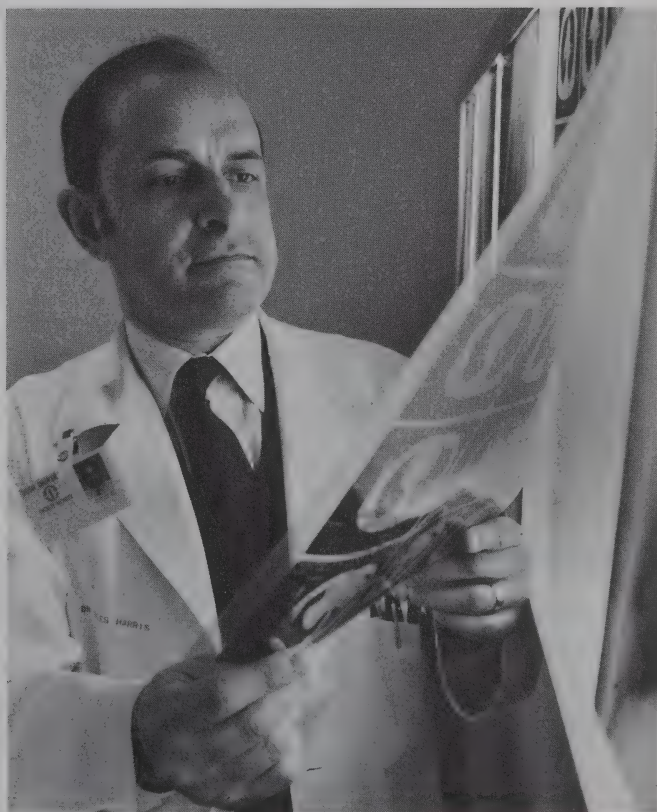
stressing clinical aspects of cancer is offered for residents. One- to three-year clinical fellowships are available and provide in-depth training in medical oncology, with rotation through related clinical fields and laboratories offered to selected trainees. The fellow is prepared for board certification in medical oncology. Application should be made to the section director.

Section of

Pulmonary Medicine

***Roger C. Bone, M.D.,
The Ralph C. Brown, M.D.,
Professor of Internal Medicine
and Director***

The Section of Pulmonary Medicine provides specialized consultation service for patients with dis-



eases of the lungs and thorax and the critical care unit. In addition to the clinical service, the section is responsible for the pulmonary laboratory, chest physical therapy and respiratory therapy. Fiberoptic bronchoscopies and other special procedures are performed.

The fellowship generally lasts three years and offers extensive participation in all of the above. Fellows manage an outpatient clinic held once a week. Supplementary rotations through intensive care, allergy, infectious disease and chest surgery round out the experience. Much of the teaching is on a personal basis. The section conducts three conferences a week. Research experiences are broad but focused around intensive care medicine, both clinical and basic aspects.

The fellowship prepares candidates for the specialty board of pulmonary medicine and critical care. Prerequisites for the fellowship are three years in an approved residency program in internal medicine or the equivalent and board eligibility in internal medicine.

Inquiries should be directed to Peter Szidon, M.D.

Section of

Rheumatology

***Thomas Schnitzer, M.D., Ph.D.,
The Willard L. Wood, M.D.,
Professor of Rheumatology
and Director***

The focus of the Section of Rheu-

matology is on clinical experience in the diagnosis and management of rheumatic disease, as well as the acquisition of skills in clinical investigation. This section offers residents and students a supervised experience with both inpatients and outpatients.

The trainees are responsible for initial interviews and physical examinations as well as follow-up management responsibilities on their patients. Teaching of the special skills required in the diagnosis and management of chronic disease patients is accomplished largely at the bedside, with about 20 to 30 percent of the clinical experience being devoted to outpatient care. It is expected that a trainee will have ample opportunity to become familiar with all of the common rheumatic disorders as well as a significant number of the more unusual rheumatic conditions.

Supervised x-ray conferences and seminars as well as journal club experiences are provided. Rotations are also available through other departments within the hospital so as to become better acquainted with immunologic techniques. Rotations are available as well through the rheumatology sections of network hospitals. Members of the resident staff are assigned for periods of at least one month and student elective rotations are also available.

Please direct inquiries to the section director.

Department of Neurological Sciences

***Ruggero G. Fariello, M.D.,
The Jean Schweppe Armour
Professor and Chairman
Christopher G. Goetz, M.D.
Residency Director***

A group of integrated research/clinical care programs organized around specific diseases and spearheaded by clinical investi-

gators serves as the core for the overall activities of the department. The major areas which all represent important clinical problems and related basic science issues include:

1. Parkinson's disease and related movement disorders
2. Epilepsy

3. Cerebrovascular disease
4. Multiple Sclerosis
5. Dementia
6. Neuromuscular diseases

The research program thus extends from studies of molecular and electrical phenomena of the nervous system and subcellular structure of nerve cells to the function of the brain as a whole in health and disease, with a major emphasis on clinical neuropharmacology.

The Department of Neurological Sciences offers a three-year residency in neurology. One year as a resident in internal medicine is a prerequisite. The residency program is accredited by the Liaison Committee of the American Medical Association and the American Board of Neurology and Psychiatry. Three residents are accepted each year into the program.

The focus of the program is to train well-rounded clinical neurologists with a strong background in and understanding of basic neurobiological sciences. The first year of the neurology residency consists of twelve months of clinical neurology. At present, eight months in clinical neurology are taken at Rush and split between the inpatient service and the consultation service. Four months are spent on clinical services at Christ Hospital and Medical Center.

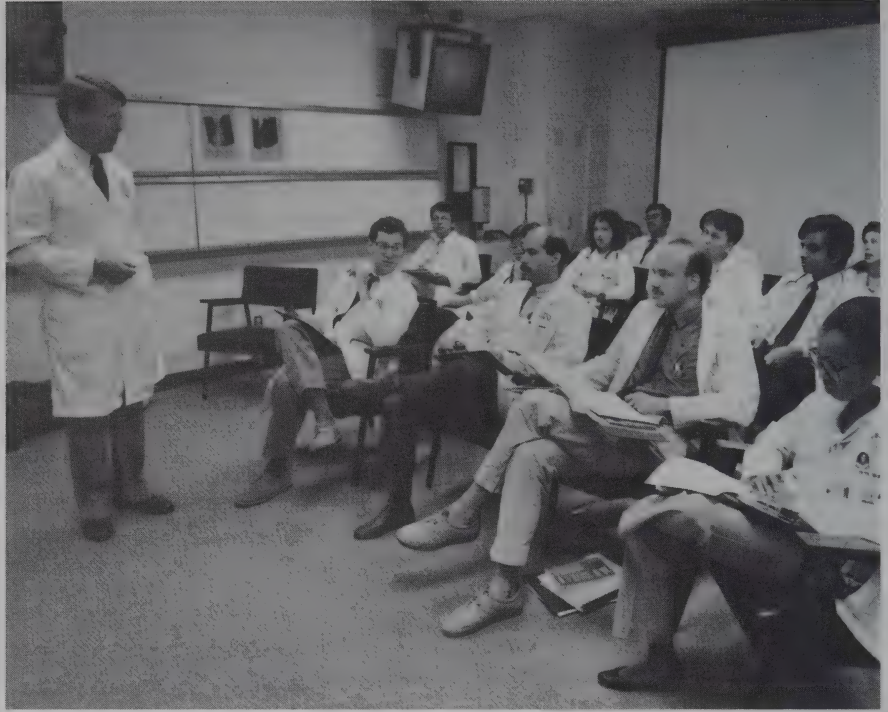
The second year consists of rotations in electroencephalography, electromyography, neuroradiology, pediatric neurology, and neuropathology. The third year consists of six months as a senior resident and six months of elective time. During this latter six-month period, the exact rotations of the resident are worked out between the resident and the program director.

All patients admitted to the neurologic service are available

for teaching and clinical experience. These patients suffer from a broad range of neurological problems including movement disorders, multiple sclerosis, epilepsy, neurodegenerative and cerebrovascular disease. Active teaching clinics also are conducted in the private outpatient offices of the Department of Neurological Sciences and include specialized clinics in epilepsy, muscular dystrophy, multiple sclerosis, dementias and movement disorders. Throughout the three-year program, residents have primary care responsibility for outpatients in the neurology clinic.

The major feature of this program is the close contact between the faculty and the small number of selected residents. Teaching rounds are made six days a week on each of the two clinical services. Weekly teaching sessions include chairman's rounds, brain cutting, neuroradiology, neurology grand rounds, neurology basic sciences conferences (for residents only), and research meetings. In addition, residents have significant teaching responsibility including both clinical teaching and assisting in neuroanatomy laboratory. Extensive clinical and preclinical research is being carried out in a wide variety of areas by members of the department. Residents are strongly urged to participate in these programs at some time during their training and closely interact with the group of Ph.D. neuroscientists and members of the department.

Fellowships are offered in EMG, EEG, and movement disorders/neuropharmacology. Inquiries should be directed to the program director.



Department of Pediatrics

***Samuel P. Gotoff, M.D.,
Woman's Board Professor
and Chairman***

*Samuel P. Gotoff, M.D., Director,
Pediatric Residency Program*

*Robert Levin, M.D.,
Program Director, Christ
Hospital and Medical Center*

*Rabi Sulayman, M.D., Program
Director, Christ Hospital and
Medical Center*

The Department of Pediatrics offers a three-year residency leading to certification by the American Board of Pediatrics. There are two tracks (separate match numbers) offered by the department with overlapping rotations. Fellowships are available in the various pediatrics subspecialties. The program is accredited by the American Medical Association.

The Pediatric Residency Program is based on the philosophy that there is a logical progression

of skills which should be mastered during each year of pediatric training. The first year emphasizes the acquisition of information gathering skills (history taking and physical examination), identification of problems, assessment of the degree of illness, mastery of technical skills, and learning to care for children with acute and chronic diseases. For the most part, these experiences take place on an inpatient service under the supervision of senior residents and faculty.

The second-year resident is then prepared for independent management of diverse and unselected pediatric problems in an acute care or emergency room setting. The second-year resident is expected to stabilize and transport acutely ill newborn infants and older children to the Medical Center. In the second as well as

the third year, the resident will select subspecialty areas for in-depth study. Except for neonatal intensive care and critical care pediatrics, specific subspecialty rotations are not required. However, a sufficient number of sub-board approved subspecialty rotations must be elected to fulfill Residency Review Committee requirements.

The third year of pediatric training emphasizes supervision of inpatient units, responsibility for the most complex problems, and interaction with consultants and other members of the health care team. Third-year residents with special skills in patient care and teaching are chosen to serve an additional year as fourth-year chief residents. These fourth-year level residents help oversee and supervise academic and clinical activities in both the Rush and Christ programs.

The teaching program in each hospital is similar, but there is some variation in schedule and style. Morning report, attending rounds, professor's rounds, grand rounds, change over rounds and lectures are held in each hospital. Introductory lectures in pediatrics are given during the summer. Subsequently, the lecture/conference series includes pediatric medical and surgical subspecialties, research, basic sciences, ethics, morbidity and mortality conferences, and journal club. The problem-oriented medical system is utilized as the basis for patient care and education.

Ten Rush medical students are assigned to each hospital for an eight-week clerkship in pediatrics. Family practice residents from the Rush-Christ and other Chicago hospital programs also rotate through the pediatric services.

Each resident, at every level, participates in a continuity of care clinic. All residents are scheduled one-half day each week dur-

ing the three years of the program. The clinic is supervised by the same preceptor throughout the year, and the residents are guided by a curriculum (outline and references) in primary care pediatrics. Each afternoon begins with a conference on a primary care topic. Residents then see well children for routine care or children with acute or chronic problems for whom they have continued responsibility.

Night and weekend call is every fourth night in each hospital throughout the three years. Each year, there is a three week vacation (usually divided in two parts) and one week for educational leave to pursue in-depth study or attend a meeting.

The Traditional Program Rush-Presbyterian-St. Luke's Medical Center

Ten residents are matched each year in this program. One resident each year from Presbyterian-St. Luke's Hospital is switched with a resident from the primary care track to expose the Chicago-based residents to a suburban hospital. In the second year, the Chicago resident rotates in the Christ Hospital and Medical Center emergency medicine program to increase exposure to minor surgery and orthopedics. The first- and third-year rotations are primarily on inpatient services.

Special features of the basic rotation include one month for first-year residents in a basic child development curriculum which includes experiences in birth defects, child life, child protective services, clinical nutrition, communicative disorders, developmental disabilities, physical therapy, psychology and behavioral pediatrics.

In the second year, residents have an opportunity to elect one month in chronic diseases with special experiences in develop-

mental disabilities and rehabilitation in Rush-affiliated Marianjoy Rehabilitation Center, Misericordia Hospital and Shriners Hospital for Crippled Children. During the second year, there is a four-week assignment to transport call, in which the resident is responsible for stabilization of newborn infants and children in community hospitals which refer to Rush-Presbyterian-St. Luke's.

The third year of training gives residents responsibility for the supervision of general and specialty units, coordination of consulting services, teaching junior residents and students, and elective time.

Special programs include the perinatal centers, cardiovascular surgery, cystic fibrosis, metabolic genetics, scoliosis, meningomyelocele, chronic renal failure, and renal, liver and bone marrow transplantation. In addition to patients referred for specialized medical and surgical programs, children are admitted by private pediatricians and pediatricians in the Medical Center's ANCHOR HMO, and through the emergency room.

The Primary Care Program Christ Hospital and Medical Center

The principal objective of this program is to allow more opportunity for residents to provide continuity of care under the supervision of a full-time pediatrician-preceptor who serves as a colleague and supervisor for a model group practice of five residents. In addition to the traditional subject matter of pediatrics, this program emphasizes primary care experiences in adolescent medicine, behavioral and developmental pediatrics, school health and sports medicine.

Twenty one residents are based at Christ. This hospital serves a large south suburban community and delivers over 4,000 babies annually, the second highest de-

livery rate in the state of Illinois. There are 50 general pediatric beds, 7 PICU beds, and 20 neonatal/special care nursery beds. In addition to the general pediatrics clinics, there are ambulatory programs in adolescent medicine, cardiology, endocrinology, gastroenterology, hematology/oncology, neurology and rehabilitation.

Morning report for all residents and students is held five days a week. Teaching attending rounds are held three times a week on the general service and daily in the NICU and PICU. Christ Hospital and Medical Center has a regional perinatal center, a trauma center and an emergency medicine program which provide experience in a variety of minor orthopedics and surgical problems, as well as emergency medical pediatrics.

Residents in the primary care track at Christ have one or two mandatory rotations each year at Rush-Presbyterian-St. Luke's which provide a contrasting patient population and exposure to additional Rush faculty. Second- and third-year residents may take electives at Rush-Presbyterian-St. Luke's, with night and weekend call responsibilities in Oak Lawn.

Section of

Adolescent and Young Adult Medicine

Gary R. Strokosch, M.D., Director

The focus of the Section of Adolescent and Young Adult Medicine is the comprehensive health care of patients approximately 12 to 21 years of age. The 19-bed inpatient unit at Rush-Presbyterian-St. Luke's Medical Center provides the setting for inpatient training. Outpatient facilities at Rush-Presbyterian-St. Luke's Medical Center, and Christ Hospi-

tal and Medical Center provide the setting for ambulatory training.

Section of

Allergy/Clinical Immunology

David Chudwin, M.D., Director

The Allergy/Clinical Immunology Program is a combined pediatric/internal medicine training program which emphasizes care of patients with allergic, autoimmune and immunodeficiency disorders. Patients are seen in an outpatient clinic and on inpatient pediatric and medicine units of Rush-Presbyterian-St. Luke's Medical Center. Research opportunities are available in the Department of Immunology/Microbiology in a variety of areas, including the biology of the allergic response, host defense mechanisms, the acute phase proteins, and complement. Elective rotations are available for residents, and a two- or three-year fellowship program is approved by the American Board of Allergy and Immunology.

Section of

Behavioral Pediatrics

Anthony J. Richtsmeier, M.D., Director

Behavioral pediatrics is a consultation service for a wide variety of pediatric problems that have a strong psychological and/or social influence. There is a special emphasis on integrating psychosocial and biological factors in the assessment and care of children and families. Services are available for difficulties that arise during infancy, early childhood, middle childhood and adolescence. Behavioral pediatrics works closely with the Sections of Child Psychiatry and Psychiatric Psychology. The Section of

Behavioral Pediatrics is active in teaching on the clinical services and electives are available for house staff and students.

Section of

Emergency Services

Susan Unfer, M.D., Director

The program is designed to prepare the resident to care for the acute care needs of children and adolescents. Residents provide 24-hour, on-site coverage in the emergency room at Rush with continuous consultation by the pediatric faculty and supporting consultation services. Approximately 12,000 patients are seen annually.

Section of

Pediatric Cardiology

H. Gunther Bucheleres, M.D., Director

The patient population served by the section originates from within and outside of the Rush network system as well as from various local and state agencies. The section staff participates in undergraduate and graduate medical education programs.

The curriculum covers both the clinical and laboratory diagnosis of pediatric heart disease. Clinical conferences, ward rounds and ambulatory settings develop the trainee's experience in diagnosis and management. The trainee participates in intraoperative and postoperative patient care.

Section of

Cytogenetics and Biomedical Genetics

Paul Wong, M.D., M.Sc., Director
This section provides clinical and



laboratory training in genetics for pediatric and obstetric residents, as well as other residents. Electives are also available for medical students. Participation in research may be arranged.

Clinical training includes: evaluation and treatment of infants and children with physical malformations, mental retardation, metabolic disorders, and other inherited diseases; couples with fertility problems, recurrent miscarriages or abnormal children; patients with abnormal sexual development; older pregnant women, and women with a history of genetic problems.

Laboratory training includes chromosome studies in blood, bone marrow, amniotic cells, and CVS as well as biochemical studies.

Research activities are focused on the pathophysiology of homocysteinemia in vascular diseases.

Section of

Endocrinology and Metabolism

***Paul Mueller, M.D.,
Acting Director***

This section provides inpatient

consulting services and outpatient clinics for children with endocrine disorders, growth problems and diabetes mellitus. Elective opportunities are provided.

Section of

Pediatric Hematology/Oncology

Alexander M. Green, M.D.,
Director

The Section of Pediatric Hematology/Oncology provides services for inpatient and outpatient care of children with serious disorders of the blood, or malignant tumors. As participants in the Children's Cancer Cooperative Study Group, patients with leukemia or certain solid tumors are treated under regimens directed by protocol studies designed by this group. Residents actively participate in the bone marrow transplant program.

Section of

Infectious Diseases

Kenneth M. Boyer, M.D.,
Director

Caring for children with infectious diseases is the most frequent service provided by the practicing pediatrician. The Section of Infectious Diseases offers consultation in the management of children with serious infections and the diagnosis of problems likely to have an infectious etiology. Residents provide consultations under the supervision of the section director, participate in daily rounds and two weekly conferences, teach pediatrics to elective students, and are encouraged to pursue study of their patients in-depth. Residents may also elect to spend four weeks in a small-scale independent research project in which development,

analysis, and presentation of clinical or epidemiologic data is emphasized. Residents on elective are encouraged to become familiar with the ongoing research programs in the section dealing with the immunology of neonatal group B streptococcal infections and chemotherapy of congenital toxoplasmosis.

Section of

Neonatology

Werner Meier, M.D., Director

The Section of Neonatology provides medical and surgical services for the inborn, transferred and follow-up population. Rush-Presbyterian-St. Luke's Medical Center and Christ Hospital and Medical Center admit approximately 7,000 babies per year.

The Rush Perinatal Center serves 12 designated hospitals with 21,000 deliveries a year in the northeastern Illinois region. Rush was designated a perinatal center by the Illinois Department of Public Health in 1975. Patients in the Rush perinatal network are admitted to one of three level III units from the "in-born" deliveries of individual hospitals and from the community hospitals via a highly specialized transport system for sick infants.

Pediatric, obstetric and anesthesiology residents from Rush and family practice residents from the Rush network rotate through the newborn service at Rush. Patient care and educational programs tailored for the year of training are emphasized; research activities are available and supported by specialty services. Elective rotations for senior medical students are strongly encouraged.

Outpatient programs provide continuity of care for babies with problems related to the perinatal period that continue after dis-

charge. The continuity of care clinic coordinates through general pediatrics. A long-term, multidisciplinary, follow-up program is conducted which includes social services, psychology, physical and occupational therapy, neurology and other required subspecialties; this, and the apnea program dealing with irregularities of the breathing patterns, are coordinated by the Section of Neonatology.

Pediatric Nephrology Program

Eddie S. Moore, M.D., Director

Activities in this program include both diagnostic and therapeutic management of all renal problems seen in children, ranging from those of a structural nature through those of immunologic import. Implicit in this program is a close liaison with the urology service, in an effort to provide an integrated approach to small children with congenital or acquired structural abnormalities. Acute as well as chronic peritoneal and hemodialysis are available in addition to an acute transplant program.

Section of

Pediatric Neurology

Peter T. Heydemann, M.D., Director

The Section of Pediatric Neurology offers postgraduate training for residents in pediatrics, neurology, family practice, neurosurgery, and psychiatry. Electives are designed to meet the needs of the varied backgrounds and interests of the individual house officer. Responsibilities may include inpatient management, child neurology consultations (outpatient, child neurology visits, care of

multiple-handicapped children, e.g., meningomyelocele), and clinical care in the muscular dystrophy clinic. Regular conferences offer opportunity for didactic learning as well as resident presentations.

Section of

Pediatric Psychology

Cecilia Brocken, Ph.D., Director

Pediatric psychologists in the section provide services to the pediatric patient—infancy through young adulthood—on both an inpatient and outpatient basis. A broad range of diagnostic, therapeutic and consultative services emphasizes early assessment and intervention, family involvement and close collaboration with medical and other health care staff.

The faculty, an interdisciplinary group coordinated by the section director, are responsible for teaching the developmental/psychosocial curriculum of the pediatric residency training program. In addition to the educational opportunities inherent in the collaborative patient care which characterizes the pediatric service, formal training activities in developmental, psychosocial and behavioral aspects of patient care are provided in a required subspecialty rotation.

Section of

Pulmonary Diseases

Lewis Gibson, M.D., Director

This service cares for a large number of children with cystic fibrosis and bronchopulmonary dysplasia. An active pulmonary function laboratory supports the program.

Department of Physical Medicine and Rehabilitation

Richard F. Harvey, M.D.,
Chairman and Program Director

The Department of Physical Medicine and Rehabilitation at Rush offers a coordinated program of comprehensive services—both inpatient and outpatient—to provide a continuum of care by specialists in the evaluation and treatment of the physically disabled. Services are focused on patients' achievement of their maximum levels of physical, psychological, social and vocational potentials.

Depending on their particular needs, patients may be directed to one of three locations.

- Marianjoy Rehabilitation Center
Wheaton, Illinois
(100 beds)
- Johnston R. Bowman
Health Center for the Elderly
Chicago, Illinois
(66 beds)
- Oak Forest Hospital
Oak Forest, Illinois
(65 beds)

These centers have a multi-disciplinary staff of 20 board certified physiatrists, plus specialists in rehabilitation nursing, physical therapy, occupational therapy, speech/language pathology, neuropsychology, social work and vocational counseling.

In 1985, Rush Medical College established the Department of Physical Medicine and Rehabilitation and developed an affiliation agreement with Marianjoy Rehabilitation Center. In July, 1986, the department established the PM&R residency program and began with four residents at Marianjoy Rehabilitation Center. In July, 1987, seven new residents were enrolled and new training sites were established at the Johnston R. Bowman Health Center for the Elderly, and Oak Forest Hospital. The program is approved for seven additional residents who will commence in July, 1988. The

program's plans call for a capacity of 21 residents by July, 1989.

The combined resources of Rush-Presbyterian-St. Luke's Medical Center (RPSLMC), Marianjoy Rehabilitation Center (MRC), and Oak Forest Hospital (OFH), are now linked to provide a broad-based training program for physicians desiring to specialize in physical medicine and rehabilitation. In addition, rotations are available through a variety of clinics including community, acute care and freestanding rehabilitation sites that provide a resident with the necessary education and experiences to prepare him/her not only for board examinations, but for entry into the practice of physical medicine and rehabilitation.

The goal of the affiliated residency program for physical medicine and rehabilitation residents is to provide a clinical and didactic program to meet the training requirements of the Accreditation Council for Graduate Medical Education (ACGME) and the American Board of Physical Medicine and Rehabilitation (ABPM&R), while providing a stimulating and broad-based experience for physicians in the residency program.

The objectives supporting the above goal include the following:

1. A 36-month residency program to include strong clinical science training in the first year and a half of the residency program;
2. Provision of a broad-based experience in physical medicine and rehabilitation including inpatient, outpatient, consultation service and technical skill training within the affiliated institutions;
3. The provision of a didactic basic science program to include the fields of anatomy, functional anatomy, kinesiol-

ogy, clinical physiology, neurophysiology, pathophysiology, pathology and radiology;

4. Provision of formal instruction in the clinical areas of physical medicine and rehabilitation through instructional courses, clinical conferences, journal clubs, seminars, grand rounds and clinical labs;
5. Provision of increasing responsibility for the resident through the training program to allow for application of expertise to the point of independent skill application by the fourth year of the residency program;
6. Provision of an opportunity to learn the administrative and management aspects of rehabilitation through observation, administrative labs, program evaluation review and management evaluation review;
7. Provision of an opportunity for innovative research through involvement with Rush Medical College faculties and the Department of Research and Evaluation of the Marianjoy Rehabilitation Center;
8. Provision of an opportunity, through the Center of Occupational Health and Rehabilitation, to relate to industry, insurance companies and the legal profession the problem of work-related disabilities; to gain exposure to the legal ramifications of the Workers' Compensation law; and to learn how to give a deposition and court testimony.

In accordance with the recommendation of the ACGME and the ABPM&R, 12 of the 48 months of residency training will consist of

a coordinated program of experience in fundamental clinical skills, including six months in family practice, internal medicine, pediatrics, or general surgery, or a combination of these. The other six months of experience may include no less than one month in any of the following more specific categories: cardiology, radiology, neurology, urology, rheumatology, nephrology, vascular medicine, pediatrics, pulmonary medicine, neurosurgery, orthopedic surgery, family practice, general surgery, general internal medicine, emergency medicine, psychiatry, oncology, critical care medicine and anesthesiology.

All residents applying to the program will be accepted directly to the formal 36-month period of training after evidence of having successfully completed a one-year ACME-approved residency program as described above or an accredited "transitional" year as defined by the ACGME.

The formal 36-month period shall be spent in training at RPSLMC, MRC and OFH. This training will be provided through a series of progressively more responsibility-based quarters of experience. The quarters are designed to provide early orientation of the resident to the field, progressing to an independent attending role on a senior bed service. Electromyographic, pediatric, outpatient service and electives are included in this program of experience.

In exceptional circumstances and when agreed upon by both program directors, a resident may be accepted in transfer from another residency program; however, no guarantee can be provided that completion of the program will require less than the 36 months outlined.

Inquiries should be directed to the program director.

Department of Psychiatry

Jan Fawcett, M.D.,
The Stanley G. Harris, Sr.,
Professor and Chairman
Robert G. Zadylak, M.D.,
Director of Medical Education
and Residency Training
Katie Busch, M.D., Assistant
Director of Medical Education
and Residency Training

The Psychiatry Residency Training Program at Rush-Presbyterian-St. Luke's Medical Center is a four-year program in general psychiatry offering a developmental approach to the acquisition of the knowledge, skills and attitudes necessary for competency as physician and psychiatrist. Its objectives are to develop sound clinical judgment, and knowledge of the diagnosis, treatment and pre-

vention of psychiatric and common neurologic disorders. The program offers a balance of psychodynamic and biologic psychiatry with opportunity for subspecialization, particularly in dynamic psychotherapy, research, geriatric psychiatry, forensic psychiatry and consultation-liaison.

Psychiatry residents at the Medical Center have the opportunity to work with a broad spectrum of patients: drug abusers, alcoholics, emotionally ill children, adults, and elderly and, in controlled situations, the criminally insane. Clinical experience includes hospitalized patients, day hospital patients and outpatients. Residents also provide care annually, through the Psychiatric Consulta-



tion-Liaison Service, for over 500 medical and surgical patients who experience emotional problems related to their illnesses.

The residency training program of Rush-Presbyterian-St. Luke's Medical Center is accredited by the American Board of Neurology and Psychiatry. The four-year program is divided into four tracks of varying lengths. Each track offers instruction and experience in specific areas of psychiatry, coordinating clinical rotations with didactic work and supervision.

Track I (18 months)

Medicine and neurology rotations, rotations on inpatient open and closed psychiatric units and geriatric psychiatry unit.

Track II (15 months)

Rotations in consultation-liaison, outpatient and child psychiatry.

Track III (3 months)

Rotations designed to develop understanding of psychiatric administration, teaching, supervision and related clinical skills.

Track IV (11 months)

Elective rotations.

At the Marshall Field IV Center, the administrative base of the Department of Psychiatry, are the following ambulatory services: Adult Outpatient Clinic; Treatment Research Unit designed to conduct outpatient treatment research protocols; Dissociative Disorders Program focusing on the treatment of multiple personality disorder and other dissociative disorders; and the Rush Day School/Children's Partial Hospitalization Program, a program for children ages five to 17, combining daily classroom instruction and therapy. These outpatient services are staffed by faculty, residents, psychiatric nurses, psychologists, and social service professionals, and average 900 patient visits per month.

Presbyterian-St. Luke's Hospi-

tal has a general psychiatric open unit with 31 beds; an intensive care psychiatric unit with 19 beds; a psychiatric stress unit with 11 beds; and child psychiatry unit with 15 beds. At the Johnston R. Bowman Health Center for the Elderly there is a 22-bed geriatric psychiatry unit where treatment is tailored to the needs of older patients. Sheridan Road Hospital has an alcohol and substance abuse program, with a 20-bed inpatient unit and individual and family therapy on an outpatient basis; a Stress Disorders Unit, with 15 beds, providing treatment for the physical, emotional and social problems resulting from stressful life situations; and a closed psychiatric unit with 30 beds for general psychiatric patients; and a Dissociative Disorders Unit with 10 beds for the treatment of patients with multiple-personality disorders. There is a total of 173 psychiatric beds in the Medical Center which have, on an average, a 95 percent occupancy.

Under the codirection of Michael F. Basch, M.D., and Arnold I. Goldberg, M.D., the Center for Psychotherapy has been developed within the outpatient section of the department. It has three components: education, service and research. The center directs training in interviewing skills in Track I, courses in beginning and advanced dynamic psychotherapy and theory in Tracks I-IV, and an intensive individualized elective for residents in Track IV. Post-residency training in dynamic psychotherapy is also offered.

Currently the department offers one-year postgraduate fellowships in consultation-liaison, forensic and geriatric psychiatry, and a two-year postgraduate fellowship in child psychiatry. The Consultation-Liaison Service is directed by Stephanie von Ammon Cavanaugh, M.D.; the Section of

Psychiatry and the Law, by James L. Cavanaugh, M.D.; Geriatric Psychiatry, by Lionel Corbett, M.D., Lawrence W. Lazarus, M.D., and Andrew Ripeckyj, M.D.; the Section of Child Psychiatry, by Elva Poznanski, M.D., Linda Freeman, M.D., and Lilian Spigelman, M.D.; and the Section of Dissociative Disorders, by Bennett Braun, M.D.

The following research projects are ongoing within the department: Collaborative Depression Study; Psychobiology of Affective Disorders; Alcoholism and Lith-

ium Drug Studies; Treatment of Mentally Disordered Offenders; Self Psychology and Psychotherapy; Treatment of Depression Study; Cognitive Therapy; Depression in Medically Ill Patients; Anhedonia and Affect Deficit States; Psychobiology of the Elderly; Phenylethylamine in Affective Illness; Family Therapy; and Violence and Suicide in Adolescents and Children.

Inquiries should be addressed to Robert G. Zadylak, M.D., Director of Medical Education and Residency Training.

**Rosalind D. Cartwright, Ph.D.,
Chairman**

**Linus A. Bieliauskas, Ph.D.,
Director of Clinical Training**

The Department of Psychology and Social Sciences is an independently organized department of Rush Medical College, The Graduate College and Presbyterian-St. Luke's Hospital. Departmental members are responsible for a behavioral sciences curriculum in the Medical College and participate in course offerings in the College of Nursing. The department also offers a Ph.D. program in health psychology through The Graduate College.

The department provides clinical psychological services on a consultation basis to all inpatient medical departments. These services include answering general behavioral diagnostic questions, provision of short-term psychological interventions, and liaison with medical staff providers. In addition, diagnostic and intervention services are provided through specialized programs in cancer, gerontology, neuropsychology, pediatric psychology, pain and stress management, and sleep disorders. Outpatient services are also provided for diagnosis and management of pain and stress, for cognitive remediation,

and for disorders of sleep and wakefulness.

The department is also heavily involved in research endeavors in many aspects of interaction between psychology and medicine. A sampling of currently active research topics includes: cognitive and affective changes in patients with Parkinson's disease; assessment during the WADA procedure; chronic pelvic pain in males and females; innovative treatments of sleep apnea; role loss, depression, and dreaming; use of lights for resetting circadian rhythms; psychology and mental health services in HMOs; evaluation and assessment of headache disorders; behavioral studies of myotonic dystrophy; chronic hallucinosis in Parkinson's disease; assessing the changes in quality of life in patients with cancer; evaluation of malingering in patients with low back pain; sleep and psychological characteristics of patients with fibrositis; and cognitive decline in normal aging and in CNS disorders in the elderly.

The department offers a predoctoral clinical psychology internship program which is fully accredited by the American Psychological Association. Students apply to one of four specialty train-

Department of Psychology and Social Sciences

ing programs in the internship: Clinical Child Psychology, Health Psychology and Clinical Neuropsychology and Rehabilitation Psychology. Approximately 60 to 70 percent of the intern's time is spent in specialty-related training during the internship year, with the remaining time devoted to more general intern experiences, conferences, and seminars. All programs are designed to fulfill the internship requirement for doctoral programs in clinical psy-

chology. The department also offers postdoctoral fellowships in geropsychology and psycho-oncology. Funding is also being sought for postdoctoral fellowships in other specialty areas.

Supervision in training is provided by a staff of 25 clinical psychologists and two physicians. The internship and postdoctoral fellowships begin on July 1. Inquiries should be directed to Linas A. Bieliauskas, Ph.D., Director of Clinical Training.



Surgical Sciences and Services

L. Penfield Faber, M.D.
Associate Dean for
Surgical Sciences and Services
and Associate Vice President
for Medical Affairs

Department of Anesthesiology

***Anthony D. Ivankovich, M.D.,
The William Gottschalk, M.D.,
Professor and Chairman***

The Department of Anesthesiology offers a four-year residency program approved by the American Board of Anesthesiology. The anesthesiology house staff consists of 26 residents. The program is an integrated, progressive, clinical experience directed toward the residents' acquisition of a broad scientific background and the clinical expertise necessary to provide excellence in their performance of anesthesiology functions for the rest of their professional lives.

To accomplish these goals, and in conjunction with the requirements of the American Board of Anesthesiology, the program is divided into a "clinical base" year (PG-1) and the "clinical anesthesia training" years (CA-1, CA-2, CA-3). Following an extensive two-month orientation and introduction to the field of anesthesiology, the first-year resident begins a clinical base year designed to provide a solid background in the fields of medicine which are in constant interplay with anesthesiology. During this 12-month period, outside of the Department of Anesthesiology, the residents train in medicine, surgery, pediatrics, and other fields which are of importance to anesthetic practice. After four months of mandatory rotations in internal medicine and surgery, the resident has the choice of training in such specialized areas as cardiology, pulmonary medicine, nephrology, endocrinology, cardiovascular surgery, obstetrics, thoracic surgery with bronchoscopy experience and high-risk neonatology. Thus the clinical base year should give residents the background necessary to deal with the respiratory, cardiovascular, and other medical problems which are important components of anesthetic practice.

During the clinical anesthesia training years (CA-1, CA-2, CA-3), under the direct supervision of the academic staff, residents are given increasing responsibilities in the management of patients undergoing anesthesia in the operating room, the labor and delivery suite, and special care areas such as radiology and the neonatal intensive care unit. With increasing maturity, residents are assigned to anesthesia specialty areas such as neurosurgery, cardiovascular surgery, obstetrics, the surgical intensive care unit, and the Pain Center. Supervision of the residents is established on a one-to-one basis with a member of the faculty during their early training and for complex cases.

The residents' fourth year of training (CA-3) follows the guidelines set forth by the American Board of Anesthesiology but is flexible enough to meet the individual needs of the resident as he/she finishes training and prepares for entry into anesthetic practice. Depending upon the resident's previous performance and anticipated practice needs, the resident and program director collaborate to select one of the three tracks designated as the "Advanced Clinical Track," "Subspecialty Clinical Track," or "Clinical Scientist Track." Regardless of the track selected, residents in the CA-3 year will be assigned to the more difficult or complex anesthetic procedures or to the most seriously ill patients. Active participation in the department's Pain Center, in an area of research, or in the ongoing kidney, liver or heart transplant programs would also be available for the senior resident. In addition, the resident who chooses to take the Clinical Scientist Track in his/her CA-3 year, followed by six months of additional research work, may receive a Master of Science Degree in Pharmacology.

Our department's research efforts encompass both basic sciences and clinical investigation. To develop and improve research skills the residents' participation is encouraged at all levels of training. A few of the ongoing areas of investigation are the development of synthetic erythrocytes and artificial blood substitutes, a non-invasive method to determine cardiac output, a cerebral blood-flow model in a subhuman primate, a shock model in dogs, drug effects in MAO-inhibited patients, new muscle relaxants and intraocular pressure, fluorinated hydrocarbon therapy in venous air-embolism, fluorinated hydrocarbon cardioplegias, thromboelastogram evaluation of bleeding etiologies in critically ill patients, P.E.E.P. strategies and their effect on morbidity and mortality, continuous epidural analgesia for postoperative pain management, H.F.V. in respiratory failure, cardiovascular hemodynamics during liver transplantation, and thromboelastogram evaluation of clotting abnormali-

ties during liver transplantation.

A weekly three-hour didactic lecture series (that continues throughout the three years of clinical anesthesia) forms the core of our residents' academic training. These lectures are supplemented with weekly grand rounds, tutorials, visiting professors, a journal club, participation at the Illinois Society of Anesthesia Study Commission, and the meetings of the Chicago Society of Anesthesiology which combine to make the program a highly structured one, both inside and outside the operating theater.

The Department of Anesthesiology offers an academic environment combined with an excellent clinical experience that will prepare the residents well for their future role as consultants and practitioners of anesthesiology. Inquiries concerning the program should be directed to Anthony D. Ivankovich, M.D., Chairman, in care of Donna Ritacco, Education Coordinator.



**Department of
Cardiovascular/
Thoracic
Surgery**

**Hassan Najafi, M.D., Chairman
and Director, Section of Cardio-
vascular Surgery**

**C. Frederick Kittle, M.D., Director,
Section of Thoracic Surgery**

The Department of Cardiovascular/Thoracic Surgery offers a two-and-one-half to three-year residency program in cardiovascular and thoracic surgery accredited by the American Medical Association. The two sections have separate patient care functions, but share a strong, common goal in the training program. Two residents are appointed each year on July 1. Completion of an approved surgical residency and eligibility for examination by the American Board of Surgery are prerequisites for consideration. Applicants in this program who have successfully completed their training requirements are

then eligible for examination by the American Board of Thoracic Surgery.

The focus of training in the department is directed toward providing opportunity for the resident to obtain an appropriately progressive education in the field of cardiovascular and thoracic surgery and encouraging clinical research and publications.

The major clinical rotations include three months at Children's Memorial Hospital in Chicago, six months of senior responsibilities in peripheral vascular surgery, nine months of senior responsibilities in general thoracic surgery and 12 months of senior assignments in adult and congenital cardiac surgery.

All patients admitted to the service are available for teaching. Daily rounds are conducted by at-



tending physicians and provide excellent training in bedside clinical diagnosis. The department sees approximately 3,000 patients each year. Open heart procedures, abdominal aneurysmectomy, aortic bifurcation grafting, carotid endarterectomy, femoral-popliteal bypass, and thoracic aortic aneurysm are just a few examples of frequent procedures performed in the cardiovascular surgery section. In thoracic surgery, common procedures include segmentectomy, lobectomy, pneumonectomy, decortication bronchoplasty and sleeve resection.

At weekly formal cardiovascular-thoracic conferences, cases of interest are presented by several participating institutions from the city and suburbs. A monthly session provides the opportunity for residents to meet invited pro-

fessors. Time is also allotted for the teaching of thoracic radiology and pathology by informal instruction and regularly scheduled conferences. Residents are encouraged to submit papers for publication and presentation to national societies and journals. In addition, residents are sent to one of the scientific sessions of the Society of Thoracic Surgeons or the American Association for Thoracic Surgery.

Within the department, several programs are readily available to interested residents. If the resident chooses to spend one year in the laboratory prior to clinical education, opportunity will be given to acquire a master's degree in surgery during this period.

Inquiries concerning the program should be directed to the chairman.

Steven G. Economou, M.D.,
*The Helen Shedd Keith, Professor
 and Chairman; Chief-Service I*
Herand Abcarian, M.D., *Director,*
Surgical Endoscopy
Jeffrey E. Anderson, M.D.
Angel Bassuk, M.D.
Steven Bines, M.D., *Associate*
Director, Surgical Research
John S. Coon IV, M.D., Ph.D.
Frederic A. dePeyster, M.D.
Daniel J. Deziel, M.D., *Associate*
Coordinator, Resident
Clinical Activities
Alexander Doolas, M.D., *Director*
Undergraduate Surgical
Education; Chief-Service IV
Kambiz Dowlat, M.D.
Howard Gebel, Ph.D.
William C. Hopkins, Sr., M.D.,
Chief-Service B, Christ
Hospital and Medical Center
Stephen C. Jensik, M.D., Ph.D.,
Medical Supervisor, Organ
Procurement/Preservation
Leon R. Kelleher, D.D.S., *Director,*
Section of Dentistry
Inchul Lee, M.D., *Head*
Transplantation Biology Unit
Frederick Merkel, M.D.

Nahim H. Nasralla, M.D.,
Chief-Service C, Christ
Hospital and Medical Center
William Patejdl, M.D., *Chief-*
Service A, Christ Hospital
and Medical Center
Marc Pomerantz, M.D.
Jack Roberts, M.D., *Associate*
Program Director, Department
of Surgery, Christ Hospital
and Medical Center
David L. Roseman, M.D.,
Chief-Service III
Howard Sankary, M.D.
William D. Shorey, M.D.,
Consultant, Postgraduate
Surgical Education
Peter Shrock, M.D.
Albert K. Straus, M.D., Ph.D.,
Associate Director, Residency
Review; Chief-Service II
James W. Williams, M.D.,
The Jack Fraser Smith
Professor and Director,
Section of Transplantation
Surgery; Chief-Service V
Thomas R. Witt, M.D., *Coordi-*
nator, Clinical Conferences
Norman L. Wool, M.D.,
Coordinator, Resident
Clinical Activities

The general surgery residency training program at Rush University is accredited by the Residency Review Committee for Surgery for five years of training. Seven five-year and six one-year appointments are available.

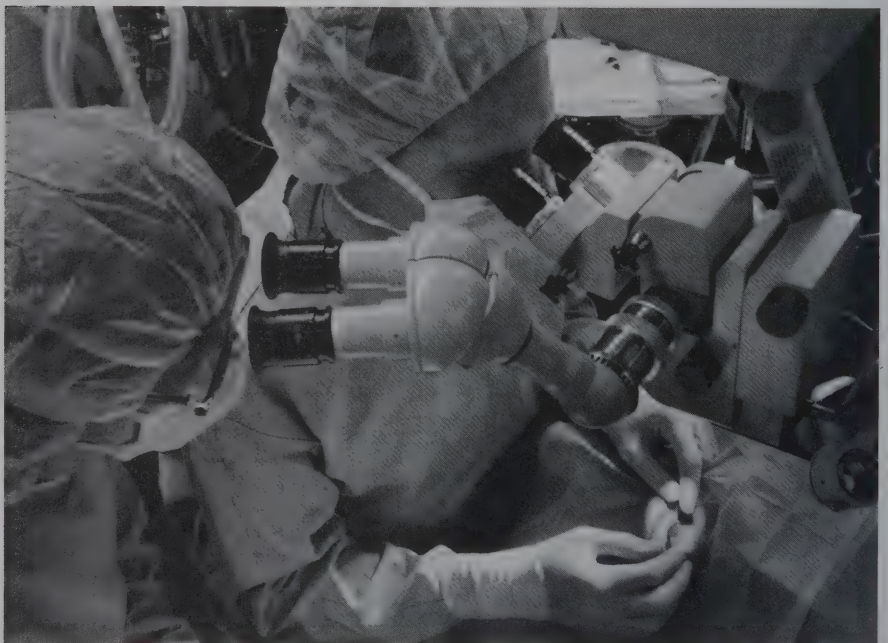
The educational program allows the trainee to obtain a well-rounded and progressive education in general surgery and in basic principles of the surgical specialties. The program is integrated at Presbyterian-St. Luke's Hospital (PSLH) and Christ Hospital and Medical Center in Chicago and is affiliated with Children's Hospital National Medical Center, Washington, D.C., and the Trauma Unit and Colo-Rectal Unit of Cook County Hospital in Chicago. The department at Rush-Presbyterian-St. Luke's Medical Center has over 2,000 admissions a year, with a somewhat larger number at Christ Hospital and Medical Center. Approximately 3,250 inpatient and outpatient surgical procedures are performed annually at each hospital.

The program is organized as follows: four general surgery serv-

ices (to include pediatric surgery) and the transplantation services at PSLH; three general surgery services (to include thoracic surgery and pediatric surgery) and the peripheral vascular surgery service at Christ Hospital and Medical Center, two rotations at Cook County Hospital and one at Children's Hospital National Medical Center.

First-year residents spend six months in general surgery; it is divided into three two-month rotations. Additionally, one month each is spent on cardiovascular/thoracic surgery, emergency room and the Surgical Intensive Care Unit. Two months are available for elective rotations in such specialties as plastic and reconstructive surgery, E.N.T., urology or neurosurgery.

The second year of training completes the core training program in basic surgery. There are seven rotations: four in general surgery, one in orthopedic trauma, one in pediatric surgery at the Children's Hospital National Medical Center, Washington, D.C., and



one at the Trauma Unit of Cook County Hospital. The second-year residents begin to participate in the teaching of medical students and first-year residents, assisted by the senior residents and attending surgeons.

Assignments during the third year of residency are more flexible. There are two rotations on general surgical services as well as rotations to anesthesia, surgical endoscopy and surgical pathology. Residents in the program are expected to initiate or participate in research projects. Resources are provided for such activity, which constitutes an important element in a resident's proper training.

In the fourth-year of the program the resident is engaged in full clinical activity, with the residents assuming increased responsibility for the primary management of patient care.

Each fifth-year resident spends the entire year as the chief surgical trainee on one of the general surgery services.

Every board-certifiable specialty in surgery is represented in the program which allows residents to interact with their peers from many disciplines during the care of patients.

Because Presbyterian-St. Luke's Hospital is a tertiary care institution, many of its patients have complex surgical problems. Accordingly, a large number of operations are performed within its new, 24-room surgical suite, including some of the most sophisticated and advanced in surgery. Christ Hospital and Medical Center has a similarly large number of patients with surgical problems, a higher proportion of which are primary. The affiliated rotations address narrower, but indispensable needs of the residents' training. This varied population of patients offers trainees the full spectrum of a surgical clinical experience.

The liver transplant program at PSLH is one of the busiest in the nation. The renal transplantation program is well established, with approximately 70 renal grafts being performed annually.

All residents with each surgical service make patient rounds as a group at least once daily. Informal rounds with attending surgeons are made daily, and formal rounds less frequently. A broad range of conferences are held throughout the institution, many with a surgical orientation and some conducted by the department. These include surgical grand rounds, patient management conference, the surgical reading program, morbidity and mortality conference, journal review, surgical pathology conference, surgical specialty lectures, the tumor conference, breast conference, lymphoma conference, CV conference, GI conference, and a number of others.

In summary, the program is broadly based, challenging the residents with a large number of patients who have the spectrum of surgical illnesses. The training is offered in a number of desirable settings and in a manner permitting graduated responsibility. It is a program typified as one of strong, academically based general surgery.

Section of

Pediatric Surgery

The focus of the Section of Pediatric Surgery at Presbyterian-St. Luke's Hospital is the delivery of optimal care to infants, children, and adolescents with critical problems consistent with the tertiary care commitment of the hospital. House officers are responsible for the pediatric surgical patients during their assignment to the General Surgery Service III. Ward rounds are held regularly. This

experience is in addition to that gained at the Children's Hospital National Medical Center, Washington, D.C., and at Christ Hospital and Medical Center.

Section of

Dentistry

Leon R. Kelleher, D.D.S., Director

The Section of Dentistry is a clinically-oriented service whose major academic effort revolves around its General Practice Residency Program. The dental service is fully accredited by the Council on Hospital and Institution Dental Services of the American Dental Association. The General Practice Residency Training Program is fully accredited by the Council on Dental Education.

The dental service is built around a nucleus of hospital-trained general practitioners and

includes representatives of several specialties. The major portion of the clinical experience is in private outpatient treatment, with emphasis on management of the medically-compromised patient.

The training program is flexible, according to the needs and interest of the trainee. It includes a concentrated three-month rotation in pain control, anesthesiology, and intravenous sedation. The medical aspects of dental practice and opportunities to participate in treating the handicapped, the aged, and the acute or chronically ill are emphasized. Each resident receives extensive experience in all aspects of oral surgery that might be encountered by a well-trained general practitioner.

Direct inquiries concerning the program to Norman Wool, M.D., Coordinator, Resident Clinical Activities.

Walter W. Whisler, M.D., Ph.D., Chairman

The Department of Neurological Surgery offers one position annually in a six-year, post-M.D. training program approved by the American Board of Neurological Surgery. The clinical aspects of the program are organized around the principle of progressive, graded responsibility with appropriate supervision.

During the first year, time is spent on rotation through general surgery and other surgical departments to develop a broad knowledge of the surgical arts and sciences. The second year is spent in clinical neurosurgery with emphasis on diagnostic neuro-radiology. In the third year, there is a six-month rotation in neurology and six months in neuropathology. The fourth year is set aside for research or electives, and the last two years are devoted to clinical neurosurgery. Rotations often

can be modified to accommodate special interests.

Training is centered within Presbyterian-St. Luke's Hospital. There are approximately 620 neurosurgical procedures performed per year.

The program is designed to present the basic neurological sciences as well as the practical aspects of neurosurgery. During the year, residents will attend neurology and neurosurgery grand rounds, brain cutting seminars, and a neurosurgical topic seminar. During the first part of the neurosurgical training, the resident will attend the Cook County Postgraduate Neuroscience Course. Primary among the strengths of the Department of Neurological Surgery is the broad variety of clinical problems that are studied and managed. Besides general cranial, spinal, pediatric, and epilepsy neurosurgery, many microsurgical and stereotaxic pro-

Department of Neurological Surgery

Department of Obstetrics and Gynecology

cedures are performed.

Research facilities within the Department of Neurological Surgery include laboratories for neurochemistry, neurophysiology and tissue culture and two full-time Ph.D.s who are actively engaged in research. Some of the projects that are carried out are done with the cooperation of other departments and other institutions. They include: investigation in motor physiology; spasticity; immunol-

**George D. Wilbanks, M.D.,
The John M. Simpson Professor
and Chairman**

**Donna S. Kirz, M.D., Director,
Rush-Christ OB-GYN,
Integrated Residency Program**
**Frank Salamone, M.D., Chairman,
Christ Hospital and
Medical Center**

**Barry Wolk, M.D., Director,
Residency Program, Christ
Hospital and Medical Center**

The Department of Obstetrics and Gynecology offers a four-year post-medical school training program approved by the American Board of Obstetrics and Gynecology. The residency emphasizes comprehensive experience in all phases of obstetrics and gynecology, as well as experience in internal medicine, neonatology, anesthesiology, intensive care, and obstetric and gynecologic pathology. The physician is prepared for the practice of general obstetrics and gynecology, for further subspecialty training, or for a career in academic obstetrics and gynecology. This is an integrated residency program that combines the departments of obstetrics and gynecology of both Presbyterian-St. Luke's and Christ hospitals to provide a total, well-balanced experience. Elective time may be spent in clinical rotations or basic research programs in the Department of Obstetrics and Gynecology or in related specialties depending on the interest of the

individual resident. There are seven positions at each level of a four-year program for a total of 28 residents. Fellowships are available in maternal/fetal medicine and reproductive endocrinology and infertility.

Individual resident. There are seven positions at each level of a four-year program for a total of 28 residents. Fellowships are available in maternal/fetal medicine and reproductive endocrinology and infertility.

ogy of brain tumors; implantable drug pumps, and neurotransplantation. Thus, a broad range of clinical as well as experimental projects is being carried out within the department, and there is an opportunity for the interested resident to participate in these activities during residency training.

Inquiries concerning the program should be directed to the chairman.

All members of the attending staff are certified by the American Board of Obstetrics and Gynecology. They are actively engaged in teaching programs for house staff and medical students. Residents at all levels are involved in student teaching at Rush Medical College.

During the first year, the resident spends eight months in obstetrics and gynecology, learning basic patient management skills and simple operative techniques. There is additional off-service rotation through general medicine, surgical intensive care and neonatal intensive care. In the second year, the resident assumes more responsibility in each rotation, as well as in the sub-specialty divisions of gynecology and endocrine infertility. In the third year, the resident begins to manage patients having more complicated problems, both in regard to preoperative work-up and obstetrical problems, and assumes more operative responsibility. There is a formal rotation on the high-risk obstetrics as well as gynecology, ultrasound, pathology and elective time. During the fourth year, the resident

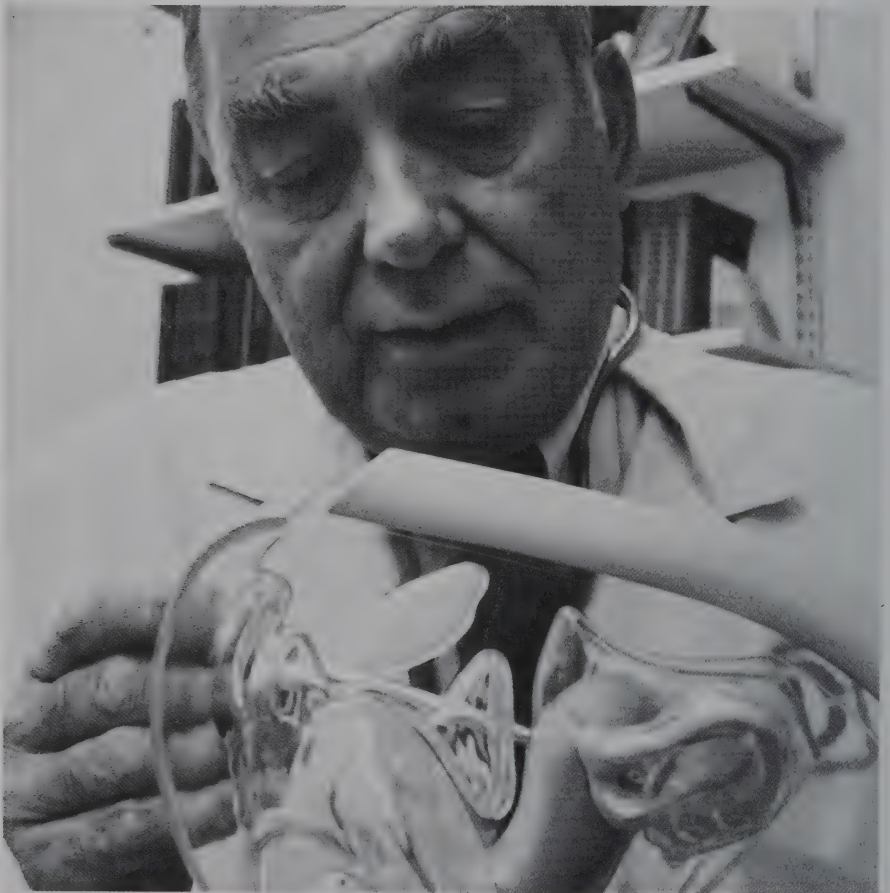
serves as chief of the respective services in obstetrics and gynecology, both at Rush and at Christ Hospital and Medical Center. In addition, the senior resident staffs the adolescent family center clinic, and spends time in uro-gynecology genetics, colposcopy, as well as adolescent gynecology.

Each resident is required to complete at least one research project of his/her choice with a faculty advisor during the four years, for presentation at the Resident Seminar each spring. Many projects result in published papers and presentations at required national and international meetings.

All services are available for teaching and clinical experience, which encompasses a broad

scope of problems including all subspecialties as listed. Active teaching clinics are conducted in the outpatient offices located in the Professional Building, the Mile Square Health Center, and at Christ Hospital and Medical Center. The services have a total of 7,500 deliveries and 5,000 operative procedures annually, with emphasis on tertiary care problems in high-risk obstetrics, oncology, endocrinology, and complicated gynecologic operative procedures.

The department has staff representation in the major obstetric and gynecologic subspecialties: perinatal biology, endocrinology and infertility (including in vitro fertilization), oncology, community obstetrics, family planning, obstetric anesthesia, sexual dys-



function, and psychosomatic obstetrics and gynecology. Each subspecialty involves interdisciplinary associations to broaden patient care, teaching and research objectives, and there is maximum interdepartmental exchange and cooperation. Faculty with these diverse backgrounds, yet with a common interest in clinical obstetrics and gynecology, offer the resident depth in basic training and opportunity for specialized consultation and learning.

Applications for this residency program should be made to: Donna Kirz, M.D., Director of the Integrated Residency Program.

Section of

General Gynecology

Denes Urban, M.D., Director
Carlos Rottman, M.D., Associate Director
Peter Sand, M.D., Associate Director

This section stresses the need for theoretical and practical instruction in the surgical aspects of gynecology, both abdominal and vaginal. Following the influence of Drs. Heney, Allen and Boysen, this section has strong emphasis on vaginal surgery. Concomitantly, members of the section have an interest in urological problems associated with pelvic relaxation, and a strong interest in infections in obstetrics and gynecology, where clinical research programs are ongoing.

Residents rotate through the general gynecology services each year, a program providing increasing responsibility for preoperative evaluation through surgery and postoperative care. In all surgical procedures the residents actively participate. The senior residents, who have adjunct attending privileges, have a major role in all surgical procedures in which

they participate. The gynecologic attending staff has overall responsibility for all procedures performed by residents. Residents are also involved in uro-gynecology, uro-dynamic laboratory.

Formal teaching activities of this section include grand rounds, patient bedside rounds, and a daily patient management conference. Each spring, a visiting professor is invited to participate in the annual seminar on "Aspects of Gynecologic Surgery."

Section of

Gynecologic Oncology

Edgardo Yordan, M.D., Director
James Graham, M.D., Associate Director
George D. Wilbanks, M.D.

The gynecologic oncology section offers a focus for continuity of care for gynecologic oncology patients. It is a multidisciplinary section which coordinates the diagnosis, management, and follow-up of the oncologic patient with diagnostic radiology, pathology, surgery, radiation therapy, and medical oncology. There are over 200 new patients each year with various gynecologic malignancies and operative procedures.

The section offers residents supervised experience in diagnosis, management, and follow-up of gynecologic malignancies. Residents spend 20 percent of their time in a multidisciplinary follow-up clinic and a diagnostic and colposcopic clinic. Rotations in gynecologic oncology are given for second-, third-, and fourth-year residents. The entire gynecologic oncology rotation is currently conducted at Presbyterian-St. Luke's Hospital.

Teaching consists of informal rounds, a weekly multidisciplinary clinic teaching conference and the formal Gynecologic Tu-

mor Board. Topics related to gynecologic oncology are discussed at grand rounds and the general tumor conferences on a periodic basis.

Several clinical research projects are in progress within the division and in cooperation with the nationwide Gynecologic Oncology Group. All residents are involved in basic cancer patient care and may elect to pursue a clinical or basic project during their training period.

Section of

Maternal/Fetal Medicine

Howard T. Strassner, M.D.,

Director

Donna Kirz, M.D., Associate

Director

The focus in the Section of Maternal/Fetal Medicine is care of the high-risk mother and fetus, both at Rush-Presbyterian-St. Luke's Medical Center and within the Rush Perinatal Network. Education of physicians in training and in practice is a vital portion of this responsibility.

The section is charged with providing obstetric education to the students, residents and fellows at Rush. We offer residents and fellows supervised experience with both inpatients and outpatients. Nearly 40 per cent of our deliveries are high-risk, totaling over 1,000 high-risk patients per year, in addition to antepartum admissions to the high-risk obstetrics service for medical, surgical and obstetric complications of pregnancy.

The Rush perinatal center is the territory referral center for the 12-hospital Rush perinatal network. Nearly 18,000 deliveries per year occur in the network, increasing our patient and research base.

Seven of the 28 residents in the OB/GYN department are assigned to various levels of re-

sponsibility on the maternal/fetal/obstetric service at Rush. The maternal fetal medicine program is approved by the American Board of Obstetrics and Gynecology for fellowship training in maternal fetal medicine. The residents are responsible with the fellow in maternal/fetal medicine for high-risk patients seen and admitted to Rush-Presbyterian-St. Luke's Medical Center. Rotations are also available in other departments and at network hospitals. Teaching consists of formal rounds, patient conferences, lectures and seminars. Involvement in the basic and clinical research of the section is encouraged. As prerequisites to acceptance, applicants for fellowship must be eligible for certification by the American Board of Obstetrics and Gynecology and licensed in the state of Illinois. Please direct inquiries to Howard T. Strassner, M.D., Director, Section of Maternal/Fetal Medicine.

Section of

Obstetrics and Gynecology Research

Lourens J.D. Zaneveld, D.V.M.,

Ph.D., Director

The Section of Obstetrics and Gynecology Research aims at amalgamating and coordinating all the research going on in the department and encouraging new research by the faculty, residents and students. The residents' research program is organized through this section. The Reproduction Research Laboratory, consisting of seven Ph.D.s or M.D.s, six graduate students, five technicians and one administrative coordinator, is part of this section. The laboratory performs research in the areas of fertility/infertility, reproductive toxicology and contraceptive development.

Section of

**Psychosomatic Obstetrics
and Gynecology**

***Stephanie Cavanaugh, M.D.,
Director***

Recognizing that the obstetrician-gynecologist is often the primary provider of health care to his/her patients, the Section of Psychosomatic Obstetrics and Gynecology is organized to stimulate and encourage expertise in this area. A productive liaison exists with the Department of Psychiatry. Combined appointments have produced an interdisciplinary team of clinicians and a research group. Consultation concerning patients with psychosomatic problems and/or unusual emotional difficulties is available to the staff at all times.

Residents have the opportunity to acquaint themselves with the effect of the emotions on reproductive and gynecologic physiology, as well as the importance of social and economic factors in physical and mental health.

The case method is used as a tool in teaching. The department is devoted to the principle of good patient care and to developing new systems for delivering this care to the community. Faculty of this section attempt to stimulate trainees to develop their own special interests by providing opportunities for enhancing their understanding of and expertise in the field.

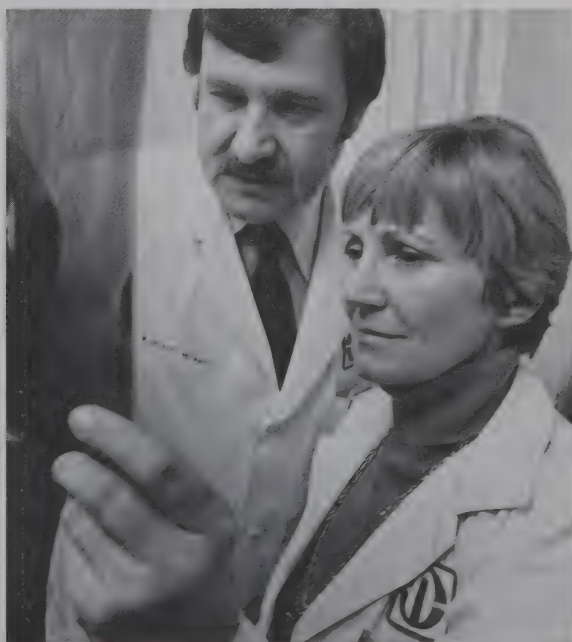
Section of

**Reproductive Endocrinology
and Infertility**

***W. Paul Dmowski, M.D., Ph.D.,
Director***

*Ewa Radwanska, M.D., Associate
Director*

Reproductive endocrinology and infertility is one of three subspecialties recognized by the American Board of Obstetrics and Gynecology. The Section of Reproductive Endocrinology and Infertility coordinates activities in this area within the Department of Obstetrics and Gynecology. The



main efforts of the section are concentrated on:

1. Providing an up-to-date, comprehensive and scientific approach to the diagnostic evaluation and treatment of infertile couples, including in vitro fertilization (IVF) and embryo transfer (ET) and gamete intrafallopian transfer (GIFT).
2. Comprehensive and scientific management of endocrine disorders in women.
3. Teaching of reproductive endocrinology and infertility at all levels of medical education—medical students, residents and subspecialty fellows.
4. Conducting clinical and basic reproductive research.

The clinical activities of the section utilize the resources of the private practices of its members. The patients are seen in the Infertility/Endocrinology Center where the complete diagnostic evaluation and ambulatory treatment of reproductive disorders are performed. The center contains a sperm bank and is backed by the Endocrine Laboratory, In Vitro Fertilization Laboratory, Microsurgery Laboratory and other facilities of the Medical Center. Procedures such as laparoscopies, hysteroscopies, IVF, GIFT and infertility surgery are performed in the inpatient and outpatient surgical facilities of the Medical Center.

Teaching activities of the section consist of regularly scheduled lectures, conferences, seminars, grand rounds, case presentations, journal club meetings and other didactic sessions as well as "bedside" teaching in the Medical Center, operating room and on surgical floors. Senior students (not more than one at a time) who sign up for the elective clerkship, participate in all activities of the section under direct supervision

of the resident, fellow and attending physician. They are assigned a topic for library research, the results of which they present to the staff at one of the conferences. Students may also participate, at the discretion of the attending physician, in ongoing research projects.

One resident, at the second-year level, is assigned to the section for a seven-week rotation. The resident participates in all clinical, surgical and didactic activities of the section and is encouraged to either take part in one of the ongoing research projects or to develop a project of his/her own. The results of such a project may be chosen for a poster display on Rush University Day. The resident is responsible for surgical admissions, schedules, orders, dictations and discharges. During the rotation, he/she is expected to develop a basic knowledge of reproductive disorders, surgical skills in laparoscopy and hysteroscopy and to become familiar with microsurgical techniques.

The educational program of the section is approved by the American Board of Obstetrics and Gynecology for a two-year fellowship in reproductive endocrinology and infertility. Two fellows, one at each year level, participate in all clinical, didactic and research activities of the section. In addition, the fellows pursue their own research projects and other activities as a part of their advanced training in reproductive endocrinology.

Members of the section conduct clinical and basic reproductive research supported by intramural and extramural grants. Current research interests and activities of the section include studies on etiologic factors of endometriosis, the effect of various treatment regimens on this disease and, in particular, the effects of a synthetic steroid,

danazol, and of gonadotropin releasing hormone (GNRH) agonists on endometriosis. Identification of an optimal method of long-term estrogen replacement, management of dysfunctional uterine bleeding, sperm separation for sex preselection, studies of luteal deficiency, and other factors affecting prognosis of induction of ovulation, such as hyperandrogenism and hyperprolactinemia are some of the examples of ongoing clinical research. Other projects include effects of tubal surgery on ovarian function, evaluation of microsurgical techniques of tubal reconstruction, processing of semen for male infertility, development of improved methodology for the cryopreservation of semen and a study of factors determining success of IVF.

Section of

Ambulatory Reproductive Health Care

Carlos Rotman, M.D., Director

The Section of Ambulatory Reproductive Health Care offers a wide range of experience in the

ambulatory care of the obstetrical and/or gynecological patient. These experiences include routine health maintenance, prenatal care, cancer detection, venereal disease detection and treatment, family planning, and detection and treatment of gynecologic disease.

In the ambulatory setting, the resident has the opportunity to follow the obstetrical patient both prenatally and during the postpartum period. For those gynecological patients requiring surgery, the resident follows the patient both preoperatively and postoperatively at the Adolescent Family Center, the private offices of Women's Health Consultants and the new ambulatory unit of Christ Hospital and Medical Center. Recently, the department has added experience in a free-standing surgicenter to the surgical rotations, since this form of care is becoming more common and important.

Emphasis is placed on preventive medicine and patient education. A resident may elect, with consent of the director, to engage in programs to develop particular skills in this area.

***William E. Deutsch, M.D.,
Chairman***

***Thomas A. Deutsch, M.D.,
Program Director***

Residency training in ophthalmology is a three-year program accredited by the Accreditation Council for Graduate Medical Education. Two residents are appointed each year and begin their ophthalmological training after one year of pre-ophthalmologic residency, in cooperation with the Department of General Surgery at Rush-Presbyterian-St. Luke's Medical Center. In this R-1 year the rotations include internal medicine, neurology, infectious disease, plastics, ENT, neurosurgery, general surgery as well

as ophthalmology. Positions are filled through the Ophthalmology Matching Program sponsored by the Association of University Professors of Ophthalmology.

The primary purpose of the ophthalmology program at the Medical Center is to convey a thorough clinical knowledge for the excellent care of patients with all types of eye problems. Opportunities do exist for clinical and basic research throughout the three-year program; this is not a prerequisite for completion of the program.

The training program emphasizes continual follow-up of patients from the beginning of training. There is not a strict pyramidal system of graduated

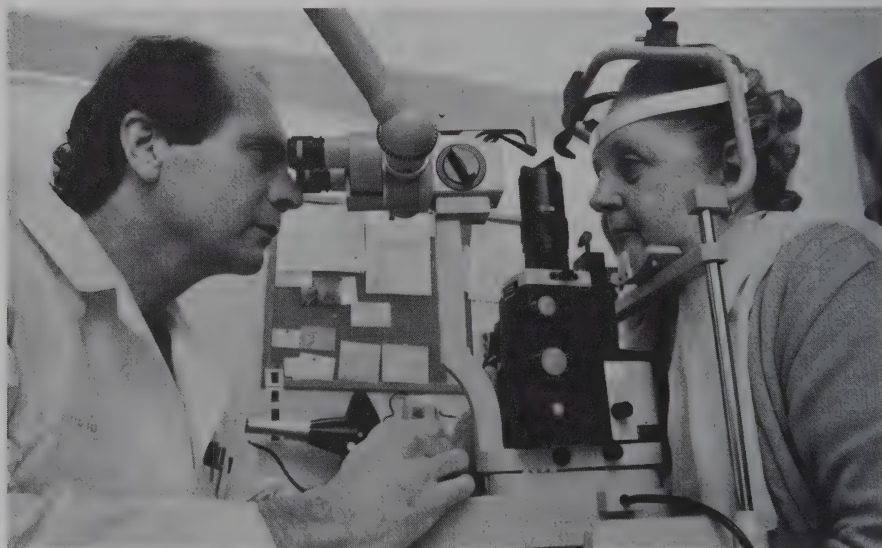
Department of Ophthalmology

responsibilities, and the rate of development of surgical technique is limited only by the resident's personal competence. Extraocular procedures are performed immediately after beginning the ophthalmology service. Intraocular procedures may be performed beginning in the latter half of the year. An attempt is made to conduct the program so that each resident may follow patients throughout the three years of the residency. The American Academy of Ophthalmology home study course is provided for each resident and assistance with this course is provided. The Chicago Curriculum in Ophthalmology, a city-wide basic and clinical science course, is mandatory for all eye residents. Clinical lectures by faculty, as well as confer-

ences, are given on a regularly scheduled basis. Grand rounds in other departments are available if the subject is of ophthalmic interest. First-year ophthalmic residents spend one-half day each week learning ophthalmic pathology and preparing presentations for pathological conferences.

Most outpatient clinical activity occurs in the Joseph and Helen Regenstein Eye Center of Rush-Presbyterian-St. Luke's Medical Center. This is a modern clinical complex with full facilities including Argon and YAG laser, complete ultrasonography, electroretinography, fluorescein angiography and other ophthalmic photography including video recordings.

Inquiries should be addressed to the chairman.



Department of Orthopedic Surgery

Jorge O. Galante, M.D.,
The William A. Hark, M.D. —
Susanne G. Swift Professor
and Chairman

Ken N. Kuo, M.D., Director,
Orthopedic Residency Program

The Department of Orthopedic Surgery offers a five-year residency accredited by the American Board of Orthopedic Surgery. Four positions are available each

year at Postgraduate Level 1. For those who have completed a residency in orthopedic surgery and are seeking specialized training, additional one-year postgraduate fellowships are available in joint replacement surgery, spinal surgery, surgery of the hand, sports medicine and orthopedic research.

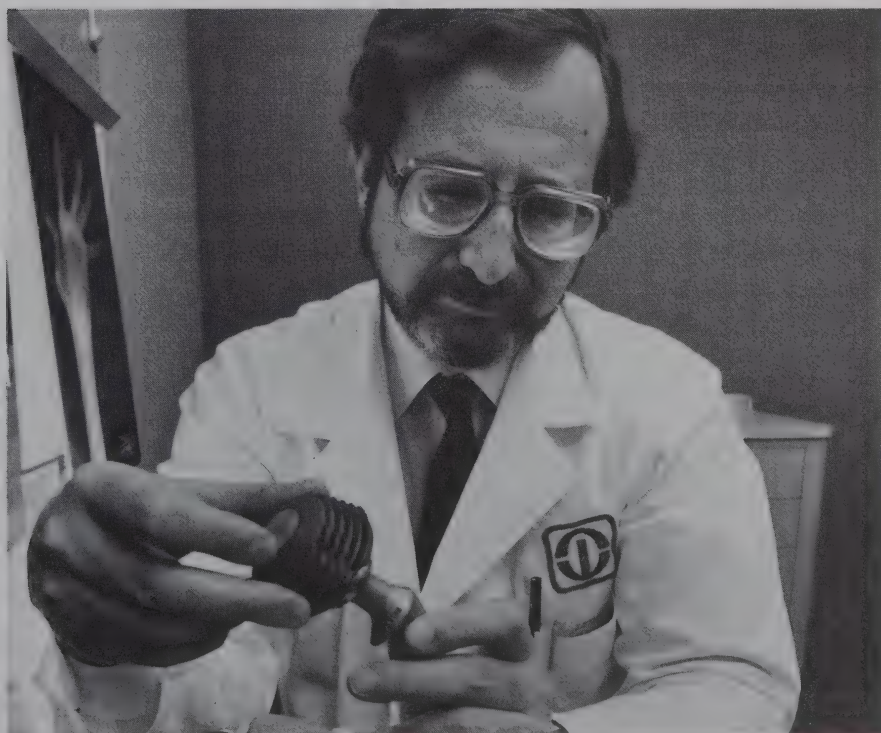
The prime focus of the residen-

cy is to prepare clinicians who are well trained in all facets of orthopedic surgery. In addition to ample exposure in general orthopedics, the residents participate in the care of patients with complex problems in joint replacement, spinal deformities, pediatric orthopedics, orthopedic oncology, hand surgery, adult spine surgery, foot surgery and sports injuries. All residents are expected to participate in clinical research during their training. For those who have academic interests, there is an opportunity for a six-month rotation in laboratory research.

The residency is organized on the principle of increasing resident responsibility under the supervision of the attending staff. The first postgraduate year is a rotating surgical internship with exposure to general surgery, neurosurgery, cardiovascular surgery, plastic surgery, and surgical intensive care. During the second and third postgraduate years, the resident serves as a junior house

officer on the orthopedic services at Rush-Presbyterian-St. Luke's Medical Center and Christ Hospital and Medical Center. The elective rotation in orthopedic research is available during the third postgraduate year for those who have acquired a good clinical background. During the fourth year, the resident spends six to nine months in pediatric orthopedic rotation, with the remaining time serving as a senior resident at Rush-Presbyterian-St. Luke's Medical Center. The pediatric orthopedic rotation is either at Shriner's Hospital for Crippled Children in Chicago or at Denver Children's Hospital. The fifth postgraduate year is a chief resident position with advanced surgical and patient care opportunities at both Rush and Christ Hospital and Medical Center.

All patients at Rush and the affiliated hospitals are available for the teaching experience. Clinical exposure encompasses a broad scope of musculoskeletal problems



including joint replacement, spine surgery, pediatric orthopedics, orthopedic oncology, trauma, sports injuries, hand surgery, foot surgery and surgery for arthritis. Outpatient exposure is provided in the private offices of the attending staff which are located in the adjacent Professional Building. Resident-supervised clinics are held weekly encompassing patients with fractures, pediatric orthopedic problems and general orthopedics. Pediatric orthopedic rotation at Shriner's Hospital and Denver Children's Hospital provides additional experiences in management of clinic outpatient. The attending staff at Rush consists of 12 full-time board certified orthopedic surgeons. All areas of orthopedic subspecialty are represented.

In addition to clinical teaching, daily didactic conferences are held at the Medical Center. These conferences cover topics including surgical indications, pediatric orthopedics, surgical anatomy, sports medicine, basic sciences, and histopathology of musculoskeletal disorders. Weekly grand rounds are held on Saturday morning and interesting cases are presented by the residents and are discussed by the attending staff, with participation of orthopedic surgeons from the community. Distinguished visiting professors are invited several times a year with their emphasis centering on lectures and discussions with the resident staff. Workshops on technical skills in orthopedic surgery are held during the year to give the residents additional "hands-on" exposure in specialized surgical skills.

The department maintains a dedicated emphasis on both basic and clinical research. A full-time staff of over 30 professionals, including three with Ph.D. degrees, is employed in orthopedic research. The biomechanics

laboratory contains a sophisticated opto-electronic gait analysis laboratory which is utilized in projects evaluating total joint arthroplasty, cerebral palsy, osteotomy and knee ligament injuries. Other areas of ongoing investigation include stress analysis of total hip and total knee prostheses, bone remodeling biomechanics, materials analysis of orthopedic implants, development of new prosthetic devices, new applications of bio-electricity in orthopedics, and cartilage biochemistry. The Department of Orthopedic Surgery has pioneered the use of porous materials to attach prosthetic implants to the skeleton. Research from the department has won numerous national and international awards.

Section of

Spinal Surgery

Ronald L. DeWald, M.D.,
Director

The Section of Spinal Surgery is dedicated to patient care, resident education and clinical research. Diagnosis and treatment are rendered to a wide variety of spinal afflictions including deformity, tumors, infections, fractures, and degenerative and metabolic diseases. Approximately 700 new spinal patients are evaluated each year, providing a broad base for resident education. Four to six spinal surgeries are performed each week employing the latest techniques and instrumentation.

The Section of Spinal Surgery emphasizes the team approach to patient care. The Section is comprised of four orthopedic spine surgeons and three clinical nurse specialists. The Section also offers three fellowship positions for board eligible orthopedic surgeons. The resident is part of the

team, and expected to be an active participant in patient care. Resident participation includes diagnostic evaluation in the office, pre- and post-operative care in the hospital and surgical responsibility in the operating room. Residents assume an increasing role in patient care commensurate with their ability and interest.

Daily rounds are conducted by the attending staff providing residents with exposure to bedside diagnostic skills and teaching. The Section of Spinal Surgery is an integral part of the Department of Orthopedic Surgery. The residents continue to attend grand rounds, teaching conferences and training programs.

Section of

Orthopedic Oncology

Steven Gitelis, M.D., Director

The Section of Orthopedic Oncology is responsible for the diagnosis and treatment of musculoskeletal neoplasms. This includes soft tissue tumors primarily of the extremities and also primary bone tumors. In addition, the section is responsible for the care of patients with metastatic bone disease.

The management of primary bone and soft tissue tumors emphasizes the concept of limb salvage. This amounts to removal of the neoplasm with reconstruction to provide for a functional return. Limb salvage requires extensive knowledge and experience in the area of bone transplantation, prosthetic replacement, and tumor biology. In addition to the clinical care of patients with musculoskeletal tumors, the section has developed a broad-based research program. Clinical research is being performed in tumor biology and diagnosis. Basic science research is being done in the area

of tumor biology. This is being performed utilizing tissue culture methodology and also using animal models. In addition, bone transplantation research is being done primarily looking at the influence of electrical stimulation on the healing of allografts.

The Section of Orthopedic Oncology is comprised of one full-time orthopedic surgery attending and an orthopedic oncology nurse clinician. Residents and medical students rotate on the service on a regular basis. Elective clerkships in orthopedic oncology can be arranged for senior medical students. Finally, the Section of Orthopedic Oncology has at present a postdoctoral fellow working both in the clinical care of oncology patients and in the research laboratory. A weekly pathology conference is held on Friday in the Pathology Department. A once-a-year National Bone Tumor Conference is sponsored by the Section of Orthopedic Oncology.

Section of

Orthopedic Research

Thomas P. Andriacchi, Ph.D., The Claude N. Lambert, M.D. — Helen S. Thomson Professor of Orthopedic Surgery and Director

The research program in the Department of Orthopedics is divided into three basic science categories: biomechanics, biomaterials and biochemistry. The common goal that links these diverse scientific disciplines is their association with the prevention, treatment and understanding of musculoskeletal diseases. Each of these basic science areas interacts with the clinician to address both basic and clinically relevant research problems. The educational aspects of the pro-

gram include pre- and postdoctoral training, and the basic sciences for orthopedic residents and clinical fellows. More than 30 technical and professional staff are involved in the orthopedic research. Seminars and projects are carried out in close collaboration with the departments of biochemistry, rheumatology and pathology, as well as several universities and the National Institutes of Health.

Following is a description of the basic research program:

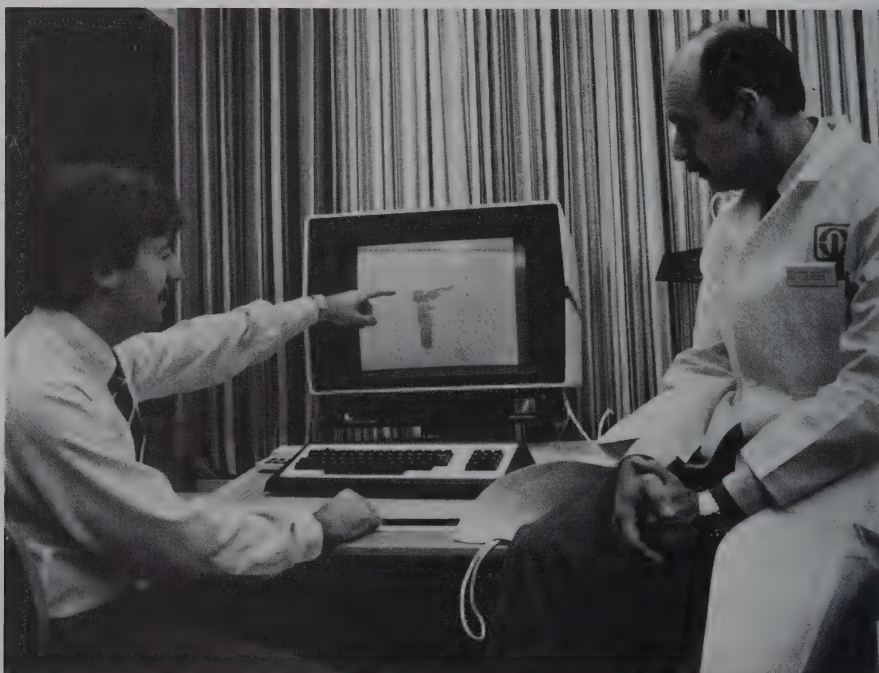
1. Biomechanics Program—
Thomas P. Andriacchi,
Ph.D., Director

The biomechanics activities apply basic principles from mechanics to the study of the human musculoskeletal system. Current research activities include the functional analysis of patients treated with various types of total joint replacement. Studies are continuing on sports-related injuries and the use of biomechanical functional evaluation to analyze and

evaluate various injuries and treatment modalities. The laboratory also utilizes analytical techniques to mathematically model the musculoskeletal system.

2. Biomaterials Program—
Jorge O. Galante, M.D.,
Director

The use of titanium materials attached by a bone ingrowth to replace defects in the skeletal system has been a noteworthy development from our laboratories. Factors which control bone ingrowth and remodeling are under investigation. A new program is beginning in the department to quantitate specific mechanical parameters and their relationship to a biological response in bone. There is also an ongoing study of the metal ion released from various implant materials to calculate potential toxic or carcinogenic effects of the metals in the body.



3. **Biochemistry Program—**
James H. Kimura, Ph.D.,
Director
Primary emphasis has been on the biosynthesis of proteoglycans factors influencing cartilage. It is believed that understanding the molecular mechanisms for this process will lead to improved treatment for degenerative diseases of this tissue such as osteoarthritis.

Low molecular weight proteins extracted from cartilage are also being studied. Research on the molecular organization of the

extracellular cartilage matrix is carried out, including changes that occur during the differentiation of epiphyseal cartilage, calcification and replacement by bone and during osteoarthritic lesions. Current studies concentrate on the separation and characterization of the anti-invasion factor(s), its mechanism of action and the biochemistry of the specific growth inhibitory factor(s).

Inquiries regarding the program should be directed to the chairman.

David D. Caldarelli, M.D.,
The Stanton A. Friedberg,
M.D., Professor and Chairman

The Department of Otolaryngology and Bronchoesophagology offers a five-year residency fully accredited by the American Board of Otolaryngology. The training program consists of one resident per year with the first year of training in general surgery and the remaining four years in otolaryngology. Under the direct supervision of the full-time and part-time attending staff, the residents assume full responsibility for pre-operative, operative and postoperative patient care.

At network hospitals separate clinical and surgical rotations in facial plastics and neuro-otologic surgery and pediatric otolaryngology provide supplemental training.

Hospital admissions are approximately 1,000 patients annually with an average daily census of 20. The outpatient otolaryngology clinic held four days per week averages approximately 4,500 outpatient visits per year. Clinical instruction is supervised by the part- and full-time attending staff. Annually, 1,500 surgical procedures provide experience in

microscopic otology, head and neck oncology, craniofacial anomaly, maxillofacial traumas, head and neck reconstructive surgery and bronchoesophagology. Extensive laser and cryosurgery experience is also available.

Resident exposure to basic laboratory or clinical research is provided and currently involves assessment of chronic middle ear disease, airway problems in association with craniofacial anomalies, the cytologic aspects of head and neck tumors, and pathophysiology of sleep apnea syndrome. In conjunction with the Department of Therapeutic Radiology and the Section of Medical Oncology, the efficacy of adjunctive chemotherapy in head and neck cancer is being studied. In conjunction with the Section of Communicative Disorders, head and neck cancer patients continue to be studied as they receive comprehensive rehabilitation services. The establishment of the Speech Physiology Laboratory, in the Section of Communicative Disorders, provides the opportunity for residents to learn first hand concepts underlying air pressure and airflow measurement procedures. Clinically, the

Department of
Otolaryngology
and Broncho-
esophagology

use of this laboratory will allow objective measurement of airway function and create treatment options which are currently not available.

The residents are expected to pursue a clinical or basic laboratory research project during their training. In addition, residents are expected to present research papers at local and national specialty society meetings. Each resident is afforded the opportunity to attend a national specialty meeting or postgraduate medical education course in each year of training.

Inquiries concerning the program should be directed to the department chairman.

Section of

Communicative Disorders

***Thomas W. Jensen, Ph.D.,
Director***

The Section of Communicative

Disorders functions as an integral part of the Department of Otolaryngology and Bronchoesophagology. Approximately 4,500 patients are seen each year for audiological assessment, speech, language, and voice evaluations and therapy. Rotations through the section with case demonstrations and tutorial sessions can be arranged upon request. The otolaryngology resident spends one full month in the section, in addition to formal lectures, case studies and inservices throughout the residency education. Lecture and discussion topics include speech and hearing science as well as evaluation and management of a broad range of communicative disorders. Principles and interpretation of audio-vestibular testing are discussed, including impedance audiometry, central auditory function, auditory evoked potentials and electronystagmography.

Department of Pathology

***Ronald S. Weinstein, M.D.,
The Harriet Blair Borland
Professor, Chairman***

***John R. Dainauskas, M.D.,
Associate Chairman***

***Victor E. Gould, M.D.,
Associate Chairman***

The Department of Pathology offers an integrated five-year residency in anatomic and clinical pathology at Rush-Presbyterian-St. Luke's Medical Center and Christ Hospital and Medical Center, fully accredited by the American Medical Association. An optional one- to two-year fellowship is offered for additional training in surgical pathology subspecialties or in research training for physicians preparing for academic careers. On completion of training, all residents are qualified for examinations by the American Board of Pathology.

The objective of the program is

to provide residents with in-depth training in all facets of modern diagnostic pathology and laboratory management. The program is intellectually intensive. Residents are expected to master both theoretical and practical material. A goal of the program is to train pathologists who will be competitive for outstanding positions in either academic or community medical centers and who have the requisite training to assume a leadership role in their profession.

The first-year post-M.D. program accepts three trainees. They spend nine months on autopsies and three months on surgicals. In the second year, the majority of time is on surgicals and cytology and the minority is on autopsies. Throughout this training period, the resident attends daily departmental conferences where active cases are presented either to the

chairman or vice-chairman of the department, additional staff members, house staff and medical students. In addition, the resident attends a broad spectrum of specialty conferences, tumor conferences, clinicopathological conferences (CPC's) and grand rounds. The resident has the option of participating in the teaching of Rush medical students. Elective periods are offered in the first three years for concentrated study in selected areas or, in some instances, to initiate clinical pathology rotations. At the end of the second year, the resident may elect to enter the clinical pathology curriculum or continue in anatomic pathology. Those desiring CP accreditation spend two years rotating through clinical chemistry, microbiology, hematology, immunology and the Blood Bank. Programs in these laboratories are individualized to the needs of the resident and include both didactic and service components.

Residents electing to pursue anatomic pathology exclusively select a research topic and begin investigative work under the supervision of senior investiga-

tors. Excellent research opportunities are offered within the Department of Pathology in electron microscopy, cytopathology, neuropathology, cancer biology and medical automation. Research-oriented residents are encouraged to attend basic science seminars and lectures, to take relevant course work for purposes of enrichment and to attend national meetings. Because the research laboratories are in close proximity to the service laboratories and the Library of Rush University, it is feasible to monitor the activities of the laboratory services while engaged in active research programs. This permits residents to study the material from a large number of interesting and unique cases throughout their training. In addition to the broad-based training offered at Rush-Presbyterian-St. Luke's Medical Center and Christ Hospital and Medical Center electives can be arranged at other Chicago institutions in forensic pathology and pediatric pathology.

Inquiries concerning the program should be directed to the chairman.



Department of Plastic and Reconstructive Surgery

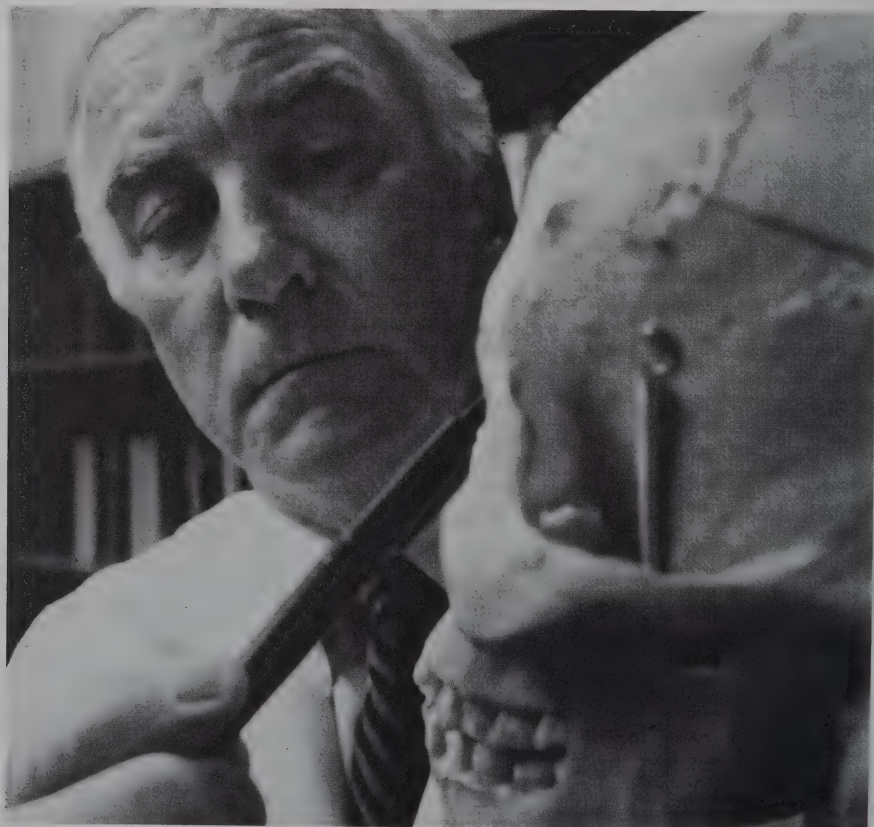
John W. Curtin, M.D., Chairman

A two-year graded training program in general plastic and reconstructive surgery is fully accredited by the Tripartite Conference Committee on Graduate Training sponsored by the American Medical Association, the American College of Surgeons, and the American Board of Plastic Surgery. To be considered for appointment, applicants must have completed a minimum of five years of acceptable training in general surgery to comply with the requirements of this service. Each year, one resident is selected to start training.

At present, an average of more than 1,700 plastic surgery patients are operated on annually at the Medical Center. Plastic surgery patients embrace a wide variety of ages and types. Bed privileges and special operative times are

offered to residents, but all of the patients in the hospital are available for teaching purposes.

Residents will be trained in overall preoperative surgical diagnosis and care, surgical treatment, and postoperative care of patients amenable to treatment by plastic surgery. Residents will gain more than adequate experience in the various methods of excisional and reparative surgery of the scalp, face, orbits, nose, oral cavity, neck, trunk and extremities, as well as experience in management of neoplasms of the head and neck, cosmetic surgery, facial trauma, surgery of the hand, burns, and congenital abnormalities of the extremities and genitalia. Cooperation with other disciplines (orthopedics, general surgery, genitourinary, gynecology, bronchoesophagology, neurosurgery) allows exceptional experience in



reconstruction of the esophagus, larynx, trachea, vagina and abdomen, and the repair of extensive encephalocele, myelomeningocele, and severe craniofacial deformities.

There is no routine rotation of plastic surgery residents to network hospitals at this time; however, future plastic surgical residents (those who at present are on the general surgical service) will rotate to the network hospitals for experience in trauma, burns and hand surgery. Plastic surgeons in network hospitals are encouraged to attend and participate in the weekly plastic surgical grand rounds at the Medical Center.

Residents are given ample opportunity to perform major procedures under the supervision of the attending staff. Increasing ability brings increased responsibility. To help the resident acquire skill and judgment in all phases of work, emphasis is being placed on personal instruction at the bedside, in the clinic, in the operating room, and in the pathology and anatomy laboratories. Active participation in research is mandatory. The program stresses participation in weekly grand rounds, tumor conferences, surgical research projects, hand seminars and journal reviews. The resident also spends time each week in private offices of the attending staff.

There is a separate hand clinic where acute and extensive reconstructive hand surgery cases are seen and operated upon (see hand surgery section). A large caseload of cleft lip, cleft palate and severe craniofacial anomalies are operated upon by the plastic surgical staff and residents at Presbyterian-St. Luke's Hospital. There is a close relationship with the Center for Craniofacial Anomalies at the University of Illinois Abraham Lincoln School of Medicine,

where more than 1,800 cases are seen each year.

Increased emphasis within the department is being given to microvascular surgery, both in the operating room and in the research laboratory. Both junior and senior residents are afforded the opportunity to attend major surgical meetings during the year. They are encouraged to present papers on their own or in conjunction with the attending staff. A resident will be given an appointment as instructor in the department for the entire training program.

Inquiries concerning the program should be directed to the chairman.

Section of

Hand Surgery

Robert R. Schenck, M.D.,
Director

The Section of Hand Surgery encompasses all facets of the care of the hand, including traumatic, reconstructive, congenital, rheumatoid and especially microsurgical applications needed in the more sophisticated aspects of hand reconstruction.

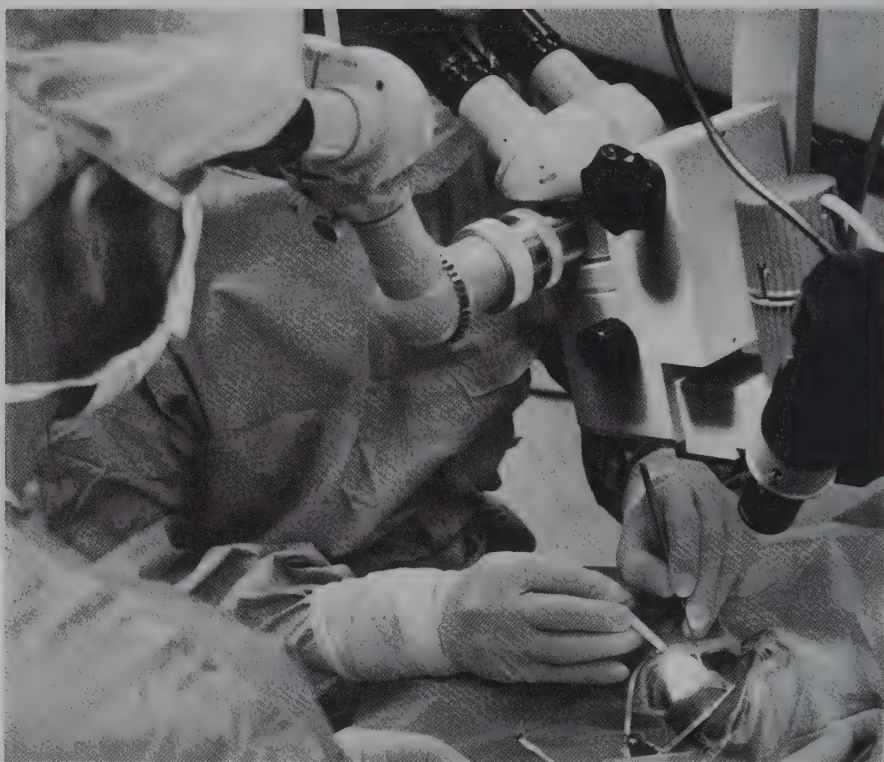
Dr. Schenck is assisted by hand surgery fellows who spend a year under his direction, and an orthopedic resident who does a three-month rotation. Their duties are not only clinical, in that they participate in the preoperative selection, operative treatment, and postoperative management in the office, but also education- and research-oriented as well. They participate in the monthly hand surgery conferences and monthly hand problem cases in orthopedic grand rounds.

A strong component of the Section of Hand Surgery involves the learning and refining of microsurgical techniques in the labora-

tory and application to research projects relating to improved methods of microvascular surgery. The laboratory is fully equipped with two operating microscopes

and staffed by a full-time technician.

Please direct inquiries to the director.



**Department of
Diagnostic
Radiology and
Nuclear
Medicine**

***Richard E. Buenger, M.D.,
Acting Chairman***
***Ernest W. Fordham, M.D.,
Vice Chairman***
***Claire Smith, M.D., Director,
Postgraduate Residency
Training Program and Medical
Student Elective Clerkship***

The Department of Diagnostic Radiology and Nuclear Medicine provides consultation for well over 130,000 patient examinations each year. The department encompasses a space of 45,000 square feet. All of the routine radiographic work is displayed daily within each subspecialty section for interpretation, consultation and teaching. Special display areas are also located in other areas of the Medical Center. Out-

patients of private physicians are examined in private radiologic offices in the Professional Building located across from the hospital. The radiology department of Sheridan Road Hospital is also operated by the staff of the Department of Radiology. Radiology residents receive their training at Rush-Presbyterian-St. Luke's Medical Center.

Modern equipment is provided for all standard radiographic examinations, and for special procedures such as magnification radiography and mammography. Fluoroscopy of the gastrointestinal tract is remotely controlled, amplified and televised. There are seven laminographic devices.

Three rooms contain biplaned

serial filming of the highest technical capabilities for angiography, bronchography, myelography, cholangiography, percutaneous biopsy and digital subtraction angiography.

Two precision, multidirectional tomographic rooms are reserved for tomography of the temporal bone, spine and chest and other areas of the body requiring special accuracy. A special section houses two scanning devices, computers and technical staff devoted to computed tomography of the brain and body.

Fluoroscopic equipment is available for surgical procedures. Coronary arteriography is routinely performed by the Section of Cardiorespiratory Diseases, Department of Medicine.

A 6,000 square foot section housing a 5 kilogauss super conductive magnet conducts research and clinical care in Magnetic Resonance Imaging (MRI). The facility contains its own display center, conference room and research space. A second 1.5 Tesla magnetic resonance image will be installed in an adjacent area in the Spring of 1988.

There are daily conferences within each section. Each week radiology grand rounds are held. The department also provides radiologic consultation at various hospital-wide conferences, medical grand rounds, pediatric grand rounds, clinical pathological conference and semi-weekly autopsy conferences.

All diagnostic radiologists and residents are urged to attend the scientific meetings of the Chicago Radiological Society, held six times a year. Time is made available for all residents to attend refresher courses at the annual convention of the Radiological Society of North America when it is held in Chicago.

Each section maintains its own collection of teaching material.

The Fay H. Squire Memorial Radiological Library is located within the department. The American College of Radiology teaching file is kept locked and available to residents only in the on-site departmental conference room.

Applicants for the four-year program are accepted after a clinical year through the Radiology Residency Training Program.

Inquiries regarding the program should be directed to Claire Smith, M.D., Director, Postgraduate Radiology Residency Training Program.

The Department of Diagnostic Radiology and Nuclear Medicine offers four positions annually in a four-year residency program in diagnostic radiology which is accredited by the American Medical Association. Fifth-year fellowships are available in neuroradiology, combined computed tomography/ultrasound/magnetic resonance imaging (MRI), nuclear medicine and interventional radiology.

Beginning with the first year of training, the resident is responsible for the interpretation of all radiography and the performance of every special procedure in the department. Every film interpretation, however, is individually checked by an attending staff member of the appropriate section, and every special procedure is supervised throughout its duration by a specialty radiologist. Various degrees of responsibility are delegated during the training program.

There is a full-time staff of 24 radiologists. For administrative and teaching purposes, the department is divided into nine sections. Each section has a full-time director, and each member of the staff is assigned to one of the sections, which are:

Section of

General Radiology

Jerry P. Petasnick, M.D., Director

This section performs all radiographic examinations not specified under other sections, all emergency examinations, and the following special examinations: arthrography, mammography, lymphangiography, peripheral arteriography, and abdominal arteriography (other than genitourinary).

Section of

Ultrasound

Bruce Silver, M.D., Director

This section performs examinations involving sectional imaging of the soft tissues of the body, including cardiovascular, abdominal and obstetrical examinations by ultrasound echo techniques.

Section of

Magnetic Resonance Imaging

David A. Turner, M.D., Director

This section has primary respon-

sibility for operation of the McCormick Magnetic Resonance Facility. It also has clinical and research responsibility for all MRI examinations except imaging studies of the central nervous system.

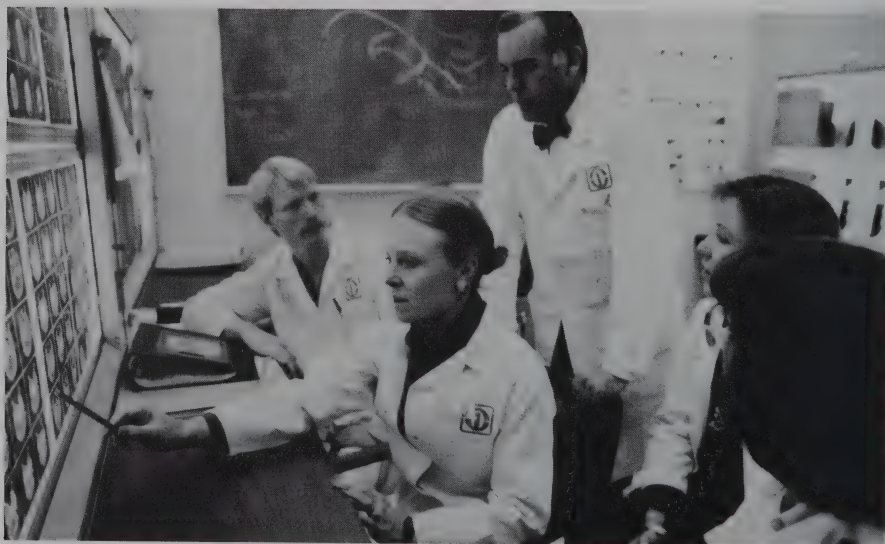
Section of

Thoracic Radiology

Maurice L. Bogdonoff, M.D., Director

The chest radiology section is responsible for all standard examinations of the chest including portable films. The section is also responsible for the performance of all interventional procedures upon the chest. This includes needle biopsies under both fluoroscopic and CT guidance, drainage and aspiration of abscesses and fluid collections in the chest, pulmonary angiography, thoracic angiography, superior venacavography, chest fluoroscopy and bronchography. Examinations are usually performed by a resident with the supervision and assistance of an attending radiologist.

Members of the section supervise and interpret all computed tomographic scans of the chest.



Section of

Gastrointestinal Radiology

Claire Smith, M.D., Director

Plain and contrast-enhanced radiographic and fluoroscopic studies of the abdomen and gastrointestinal tract, the gall bladder and biliary system, and the pancreas are performed in this section. Methods include routine bi-phasic examination of the upper alimentary tract and double contrast examinations of the colon whenever possible. Enteroclysis studies of the small bowel are selectively performed.

Section of

Urologic Radiology

Suresh K. Patel, M.D., Director

The section of Urologic Radiology is responsible for performance and interpretation of excretory urography, voiding cystourethrography, hysterosalpingography, vaginography, pull out pyelography, percutaneous nephrostomy, renal angiography, adrenal arteriography and venous sampling. The section also is responsible for work-up of renal transplant patients and performs angioplasty of renal arteries, dilation of ureteral and urethral strictures.

Section of

Pediatric Radiology

Anne Jones, M.D., Director

All routine and special radiographic procedures on children, with the exception of neuroradiologic and arteriographic studies, are performed in this section.

Section of

Neuroradiology

Michael S. Huckman, M.D., Director

This section is responsible for the following examinations: plain skull radiography, myelography, all head and neck arteriography and venography, ventriculography, pneumoencephalography, and cranial and spinal CT and magnetic resonance imaging.

Section of

Nuclear Medicine

Ernest W. Fordham, M.D., Director

The Section of Nuclear Medicine offers a two-year residency in nuclear medicine. Applicants must have completed two years of previous training in internal medicine, radiology, pathology or a combination of these. The residency program is accredited by the American Medical Association. Upon completion of the program, trainees are qualified to take the nuclear medicine board examination.

During the two-year program, trainees rotate through endocrinology, immunology and special hematology for experience in in vitro studies. Special emphasis is placed on the correlation of imaging studies. Trainees are offered optional rotations in CT and ultrasonography.

The section also offers a one-year fellowship in nuclear medicine to applicants who have completed a diagnostic radiology residency. This program qualifies trainees for the special radiology board recognizing exceptional competence in nuclear medicine.

The major educational activity of the Section of Nuclear Medicine is the daily informal case reporting conference in which trainees actively participate in the wide ranging discussions which lead to generation of the final formal report. The formal didactic clinical lecture series includes speakers from other institutions. The lecture series covering radio-pharmaceuticals and pertinent physical sciences are taught by a radiochemist and physicists.

Approximately 12,000 imaging procedures are performed annually on a wide range of modern imaging equipment including tomographic scanners (adapted for positron imaging), scintillation cameras up to 21 inches in diameter, and portable cameras with computer capability for dynamic cardiac studies.

Major interests of the section include (a) the graphic demonstration of the whole body distri-

bution of radionuclides including those primarily used for specific organ imaging, (b) continued evaluation of the application of the computer-assisted, dynamic cardiac studies (including phase analysis) and their effectiveness, and (c) collaboration with Argonne and Brookhaven National Laboratories in the evaluation of cyclotron-produced radionuclides, particularly Fe^{52} for hemopoietic marrow imaging. The section has also been very active in the clinical evaluation of commercial prototype equipment.

Trainees are actively encouraged to undertake primary responsibility for their own research projects and/or participate in ongoing departmental projects. Trainees usually attend one out-of-town meeting at departmental expense.

Inquiries concerning these programs should be directed to the section director.

Frank R. Hendrickson, M.D.,
Chairman

The department offers a four-year program leading to qualification for the American Board of Radiology examination in therapeutic radiology, starting at the internship level. The program accommodates two residents at each year's level. The residency program is accredited by the American Medical Association and the American Board of Radiology. The board eligibility requirements are four years of training after medical school, (of which three years of training are in therapeutic radiology) and successful passing of the written examination, followed by an oral examination taken one year later if the written examination is successful.

Section of

Radiation Oncology

Anantha K. Murthy, M.D.,
Director

The Department of Therapeutic Radiology is housed in the Woman's Board Cancer Treatment Center and contains the sections of clinical radiation oncology, medical physics and radiation biology. The 25,000 square feet of the Woman's Board Cancer Treatment Center contain three major treatment machines with electron capabilities: a hyperthermia unit, a treatment simulator, and a superficial contact therapy unit with intraluminal capabilities. The treatment simulator fluoroscopy unit is used to

**Department of
Therapeutic
Radiology**

produce cross-sectional images like CT scanners for treatment planning purposes and for 3-dimensional treatment planning. The department also has special procedure rooms for minor surgical procedures, basic research laboratories, offices and examining rooms. The radium laboratory contains 750 mg of radium or isotopic coolant for clinical use. An electronics shop provides maintenance design and production of special equipment.

The department registers 1,200 new cancer patients per year. There are more than 1,500 treatment visits and 3,000 follow-up visits per year. These patients are seen by ten attending staff and six house staff. All patients are seen initially by the radiation therapy house staff for preliminary evaluation and treatment planning before finalization of the treatment program with the attending staff.

The progress of the patients on treatment is frequently evaluated and monitored by both the house staff and the attending staff. Plans for all new patients and any problem patients are reviewed with the department's attending and resident staffs. Follow-up of patients post-treatment is done by both the attending and resident staff. Adequate opportunity is present to ensure development of proficiency in all the necessary external and implant modalities. Approximately one-fourth of the training is devoted to radium and isotope training. Patients are admitted directly to radiation therapy services and operating room privileges and priority are assigned for radiotherapeutic operative procedures.

The department has an integrated residency program with Christ Hospital and Medical Center. A three-month rotation through the radiation therapy department at Christ is mandatory, as well as a rotation through pediatric

radiation oncology either in the Chicago area or at other institutions in the United States.

The didactic teaching of the residents by the attending staff is carried out through three intra-departmental clinical conferences and one physics conference, as well as numerous interdepartmental conferences such as the lymphoma conference, head and neck, and medical oncology for multidisciplinary discussions. Topic reviews and journal club conferences are done on assignment by rotation among the residents. Two to three visiting professors per year and metropolitan area radiation therapy conferences provide another opportunity for learning. A weekly oncology conference with guest speakers from inside and outside the institution is also sponsored by the Department of Therapeutic Radiology.

There is an active clinical and basic research program in the areas of pre- and postoperative radiotherapy, combined chemotherapy and radiation therapy, and optimum fractionation and protraction.

Newer modalities such as intra-operative radiation therapy, hyperthermia, radiation therapy along with sensitizing chemotherapy, whole body electrons for lymphomas of the skin, whole body radiation for bone marrow transplants, endobronchial implants and interstitial radiation for brain tumors are performed under institutional as well as nationwide protocols. Opportunities for independent investigations are available.

Medical students from Rush and other schools who rotate through the department offer stimulus as well as teaching challenge. In addition, first year residents from surgery have an elective one-month rotation through therapeutic radiology. Residents rotating through diag-

nostic radiology are given lectures on therapeutic radiology on a weekly basis.

Inquiries concerning the program should be addressed to the chairman.

Section of

Medical Physics

***Lawrence H. Lanzl, Ph.D.,
Director***

The Section of Medical Physics provides service and instruction to the entire Medical Center. Its general objectives are to improve methods of disease detection, to plan and measure radiation dosage, to design new apparatus, and to protect the patient, the worker, and the public by assessing the radiation levels of the environment. These objectives are achieved through the application of physical science and engineering.

The faculty of the Section of Medical Physics of the Department of Therapeutic Radiology, together with the faculty of the Department of Medical Physics of the College of Health Sciences, are responsible for teaching radiologic physics to residents and medical students in the Departments of Diagnostic Radiology and Nuclear Medicine and Therapeutic Radiology; they have also established, among others, a series of credit courses which permit physicians to obtain the necessary training for licensure by the Nuclear Regulatory Commission. The courses cover: radiation physics and instrumentation, radiation protection, mathematics pertaining to the use and measurement of radioactivity, radiation biology and radiopharmaceutical chemistry.

Master of Science in Radiological Sciences

In addition to the residency program described above, Rush

University offers a program leading to a master of science degree in radiological sciences. The goal of the program is to train well-motivated physicians and dentists in radiological research as it applies to various branches of radiation medicine (i.e., therapeutic radiology, diagnostic radiology and nuclear medicine) and radiation protection. The program offers optional areas of inquiry. Because of the nature of present-day therapeutic radiology, the option of radiological science in therapeutic radiology will involve all forms of cancer that can be treated with ionizing radiation, hyperthermia or ultrasound. The options of radiological science in diagnostic radiology and nuclear medicine will be concerned with medical imaging by various means, for example: conventional radiography, computerized tomography (CT scanning), digital radiology; magnetic resonance imaging, together with non-invasive electronic wireless chemistry, diagnostic ultrasound, as well as radioisotope imaging for both static and dynamic studies.

Graduates of the program, having demonstrated an ability to carry out research by completing the requirements for the master of science degree, will have an enhanced opportunity to enter a career in academic medicine. Furthermore, having participated in research, they will be more proficient in evaluating the significance of research reported in the medical literature.

The studies required for the master's degree will generally start after a physician completes his/her residency program. The studies may be carried out concurrently with a residency program, provided prior approval is given by the chairman of the department in which the resident is being trained and only after two years of the residency program

is completed. The master of science degree is designed to be completed by *full-time students in one calendar year*; part-time students will, of course, require more time. Each student will submit a thesis on his/her research and will take a final examination in defense of the thesis. The program is administered by the Division of Medical Physics of The Graduate College of Rush University. Please see the Rush University Bulletin for details of the program.

Section of

Radiation Biology

**Wayne R. Hanson, Ph.D.,
Director**

The research section of therapeutic radiology is involved in several projects designed to investigate the mechanisms of the alteration of radiation injury. These investigations involve neutrons generated at Fermilab and at Argonne National Laboratory as well as pho-

tons produced at the Medical Center. The mechanisms of changes in cellular and tissue radiosensitivity may be useful in altering the therapeutic ratio and increasing the effectiveness of radiation as a treatment of cancer. A formal course in radiobiology is offered each year in the winter term designed to acquaint students with the fundamentals of the interaction of ionizing radiation with living organisms. The staff of the section also provides lectures on radiation effects to the graduate nursing oncology program each year. Residents in therapeutic radiology have a three-month rotation through the laboratory to become familiar with laboratory procedures involved in the research program. The combination of course work and the active participation in ongoing research activities provides the residents with both established concepts and current views in the field of radiobiology as applied to radiation therapy.

Department of Urology

**Charles F. McKiel, Jr., M.D.,
Chairman**

The Department of Urology offers a five-year residency program with rotation to Children's Memorial Hospital for pediatric experience. In addition, the department has a full-time pediatric urologist, who is head of the Section of Pediatric Urology. This educational experience is approved for certification by the American Board of Urology. The residency program is fully accredited by the Residency Review Committee in Urology and the Accreditation Council on Graduate Medical Education.

The first two years of residency training are devoted to nephrology, oncology, radiology, infectious diseases, 12 months general surgery, renal transplantation or other specially requested pro-

grams approved by the residency chairman. This allows the resident to have a firm foundation when clinical training is begun in the third year of residency. The resident will have at least 12 months of general surgery during the pre-urologic years.

The third year of residency is the first year in urology and emphasis is on endoscopy and the various special diagnostic techniques that are the backbone of the specialty. The resident gains wide experience in urologic surgery, usually as first or second assistant.

The third-year resident has wide and primary responsibilities in patient care, but is encouraged to conduct some research in association with a member of the staff in the urology research laboratory. Such research may be con-

tinued in future years.

The rotation in pediatric urology occurs in the third year and is at Children's Memorial Hospital during the months of April, May and June.

The fourth-year resident assumes increasing responsibility for the inpatient service at Presbyterian-St. Luke's Hospital. During the fourth year, the resident performs major urologic surgery under close supervision and begins his/her transurethral experience.

In the fifth year, the senior resident is also in charge of all conferences and delegates responsibility for education, patient care and research as seen fit. Although attending urologists are always available for counsel and assistance, the senior resident is encouraged to pursue a vigorous and self-reliant course of patient care and teaching.

All patients admitted to the service are available for teaching, and clinical experience encompasses a broad scope of problems including infertility, tumor surgery, stone disease with percutaneous ureteroscopy and extracorporeal shock wave lithotripsy experience, obstructive diseases of the

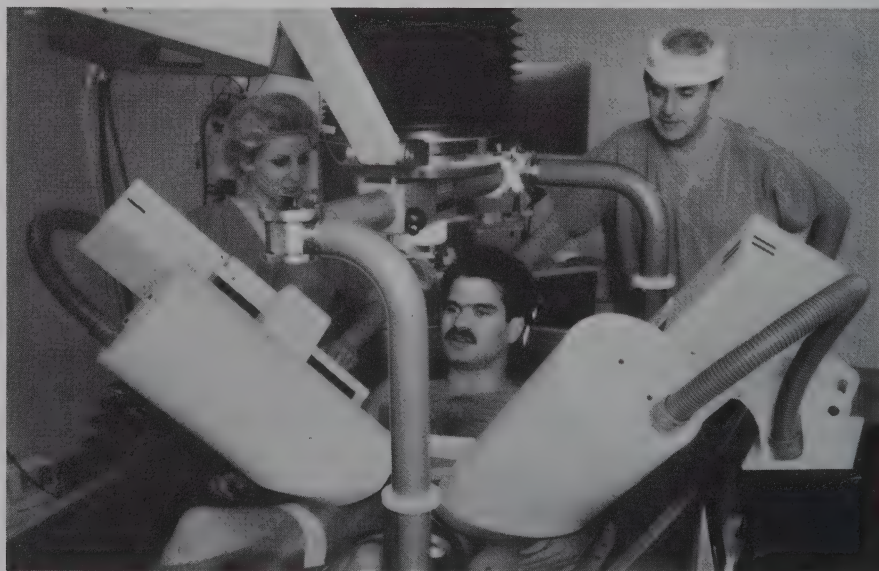
urinary tract, microsurgery and prosthesis (urinary and penile).

Active teaching clinics are conducted in private outpatient offices located in the Professional Building. The department sees approximately 3,883 patients per year, 92 percent of whom are adults and eight percent children. Currently there is an average of 4,800 surgical procedures including transurethral resections.

All residents are required to attend weekly teaching conferences held at Rush Medical College. The resident is required to participate in and attend those conferences in the institution through which he/she is rotating. The Journal Club meets twice a month. Chairman's rounds are held weekly. Morbidity and mortality conferences are held monthly.

All residents are required to participate in the Chicago Urological Society meetings. The society meets regularly during the winter months. Out-of-town speakers are regularly invited to give special rounds. These may deal with new research, new surgical or diagnostic techniques or new concepts in treatment.

All residency inquiries should be directed to the chairman.



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Senior Vice President and
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Robert A. Dame, M.B.A., M.A.
Director, Student Financial Aid
Paula Smith, M.S.
Director, Student Affairs
Paola Di Domenico
Manager, Financial Affairs
Beverly B. Huckman
Equal Opportunity Coordinator
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Dean, Rush Medical College
L. Penfield Faber, M.D.
Associate Dean, Surgical
Sciences and Services and
Associate Vice President,
Medical Affairs
Walter Fried, M.D.
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Sciences and Services and
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Colin G.D. Morley, Ph.D.
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Curriculum
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Assistant Vice President,
Medical Affairs and Assistant
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Jane Tarnow, D.N.Sc.
Assistant to the Dean

College of Health Sciences

John E. Trufant, Ed.D.
Dean, College of Health
Sciences

The Graduate College

John E. Trufant, Ed.D.
Dean, The Graduate College

Accreditations

Joint Commission on
Accreditation of
Healthcare Organizations
Accreditation Council on Graduate
Medical Education
Liaison Committee on Medical
Education
National League for Nursing
Council on Accreditation of
Education Programs for Nurse
Anesthetists
American Medical Association's
Committee on Allied Health
Education and Accreditation
(medical technology, occupa-
tional therapy)
Accrediting Commission of
Education for Health Services
Administration
Association for Clinical Pastoral
Education

Licenses

Department of Public Health,
State of Illinois
Cook County Board of Health

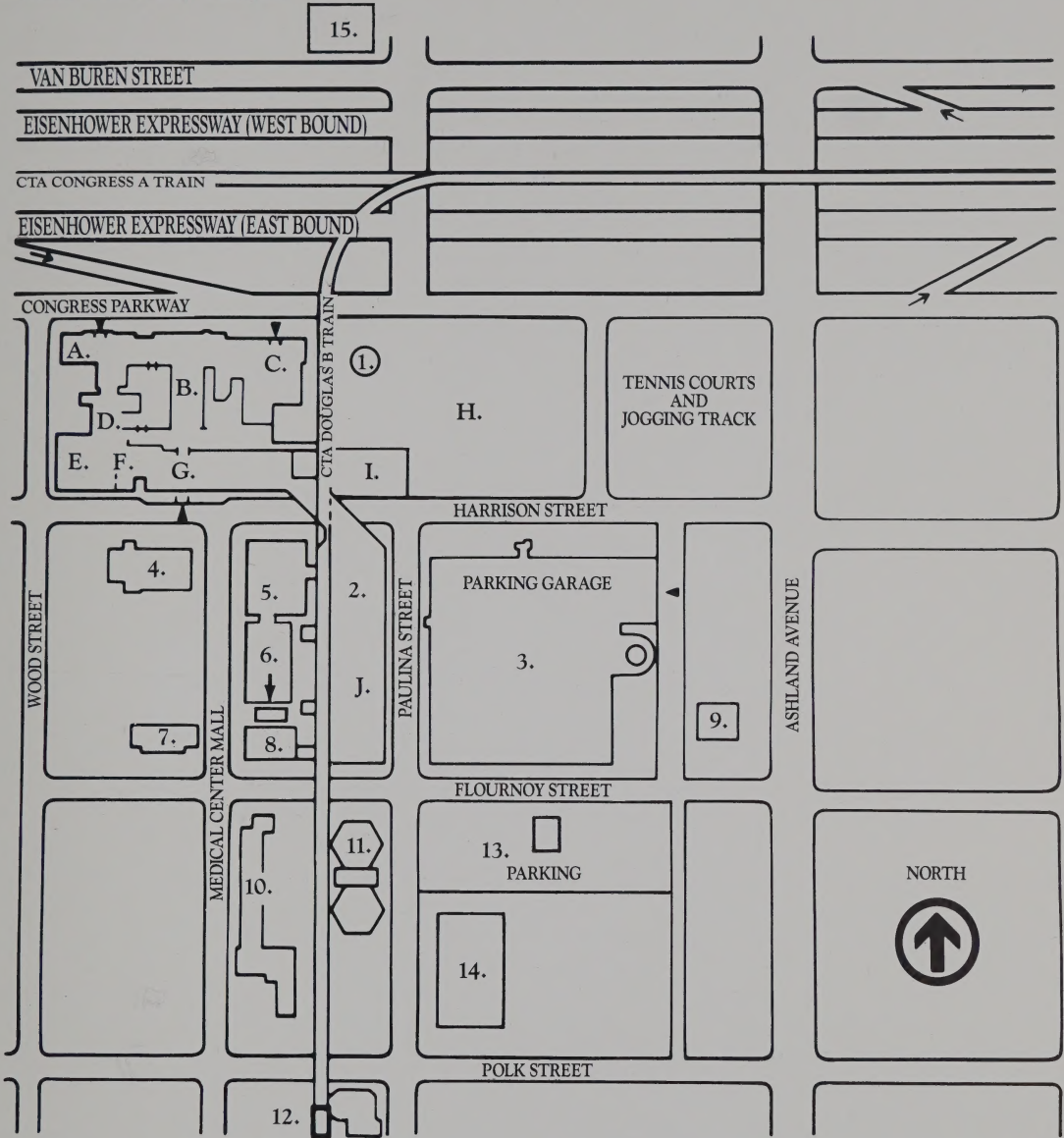
Memberships

American Hospital Association
Blue Cross/Blue Shield Health
Care Service Corporation
Illinois Hospital Association
Chicago Hospital Council
Association of American Medical
Colleges
American Association of
Colleges of Nursing



Notes:

Rush-Presbyterian-St. Luke's Medical Center
Rush University Campus



① Presbyterian-St. Luke's Hospital

- A. Jones
- B. Pavilion
- C. Kellogg Pavilion
- D. Murdock
- E. Rawson
- F. Senn
- G. Jelke South Center
- H. Atrium Building
- I. Woman's Board Cancer Treatment Center

- 2. Academic Facility
- J. Employee and Student Cafeteria

- 3. Parking Garage
- 4. Schweppe-Sprague Hall

- 5. Professional Building
- 6. Paracourse Fitness Cluster
- 7. Kidston Apartments
- 8. McCormick Apartments
- 9. Laurance Armour Day School
- 10. Marshall Field IV Mental Health Center
- 11. Johnston R. Bowman Health Center for the Elderly
- 12. Polk Street Station, CTA
- 13. Parking
- 14. Human Resources Center for Employee Development
- 15. 1700 W. Van Buren Office Building

